

FIG. 1A

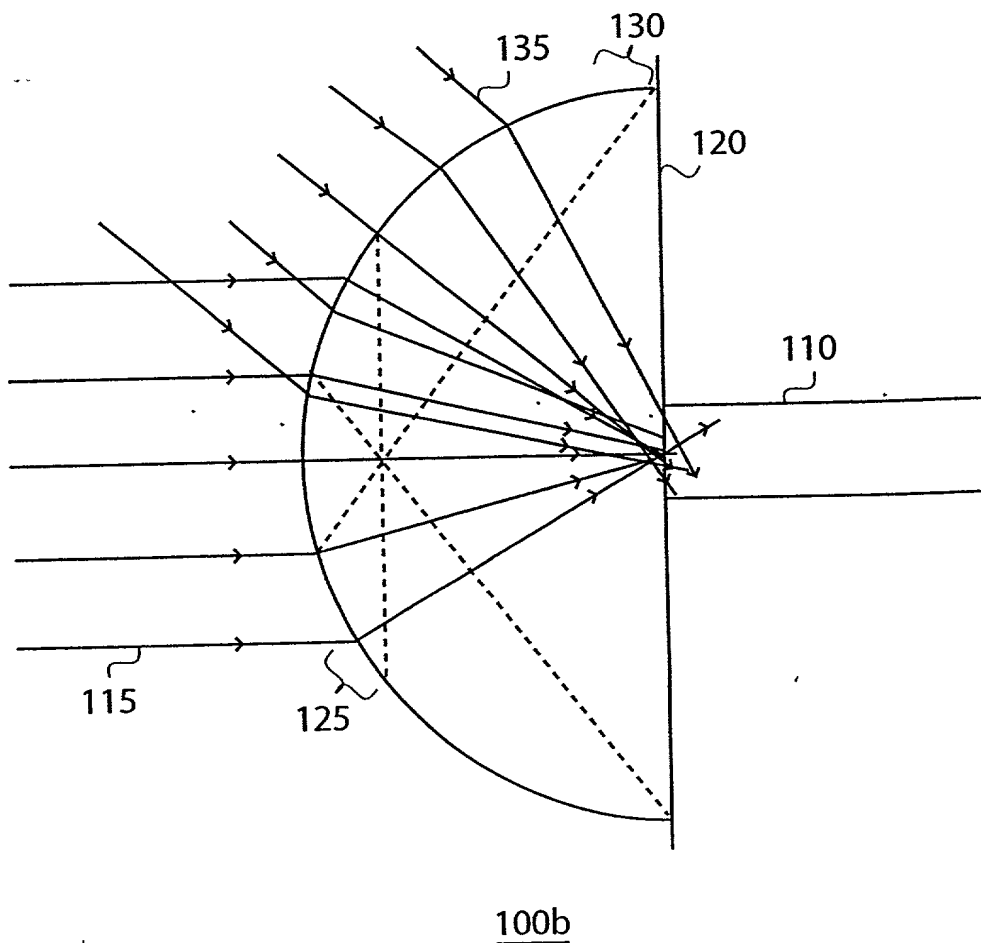


FIG. 1B

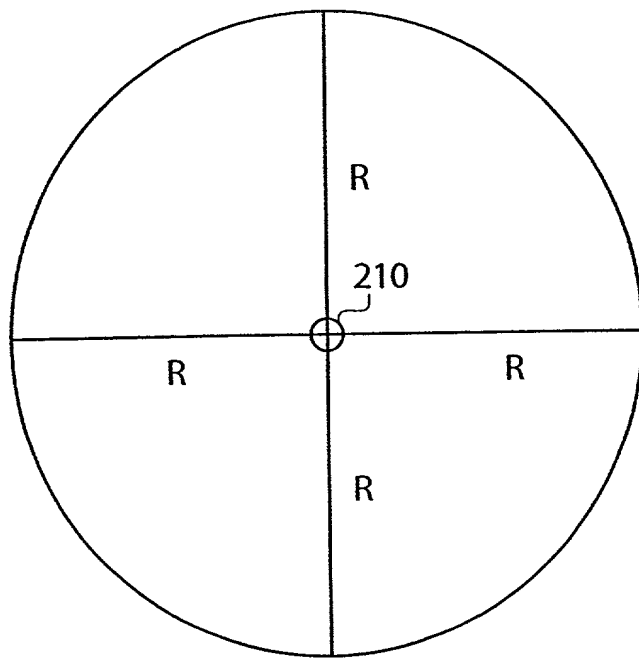


FIG. 2B

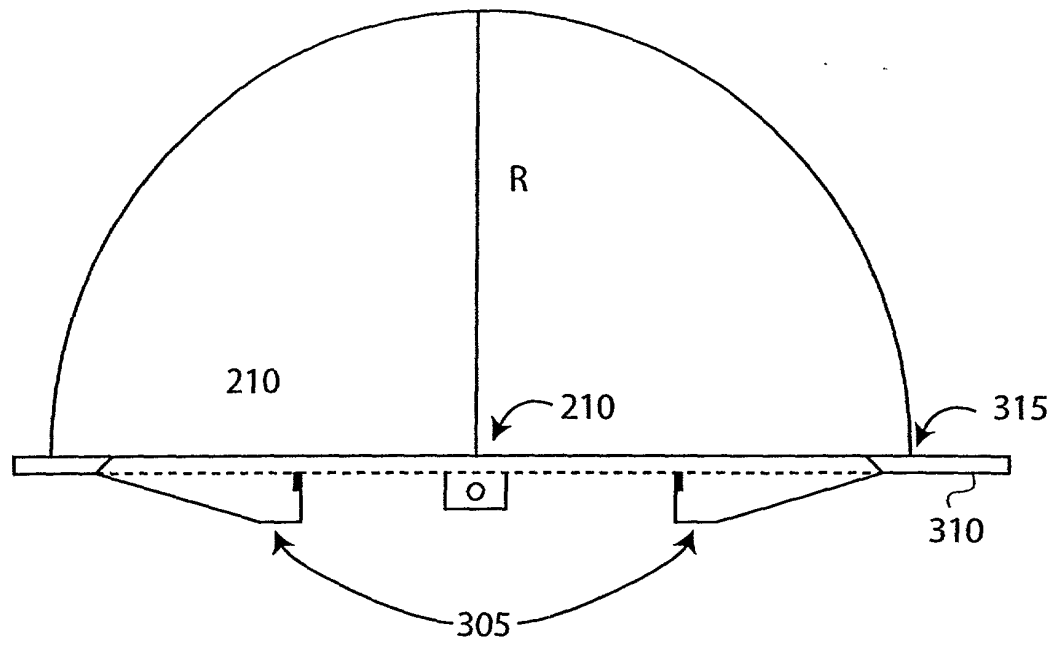


FIG. 3A

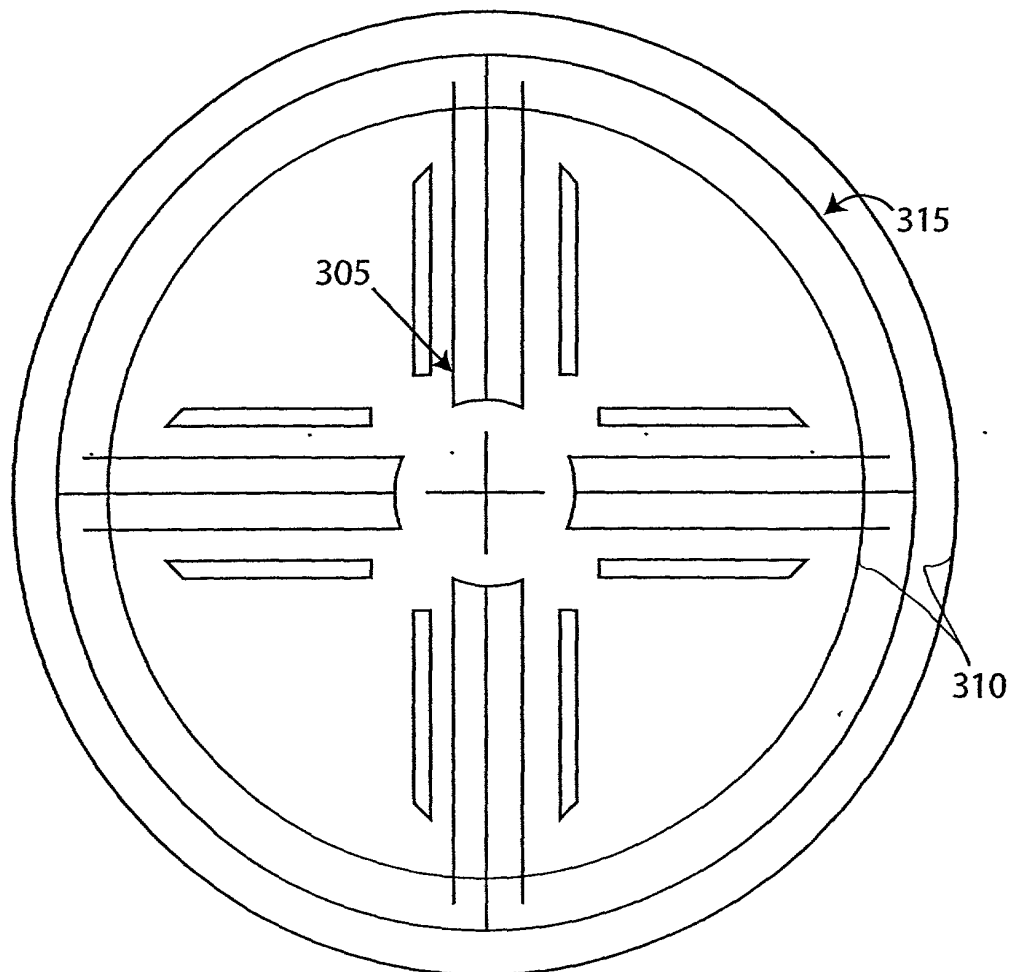


FIG. 3B

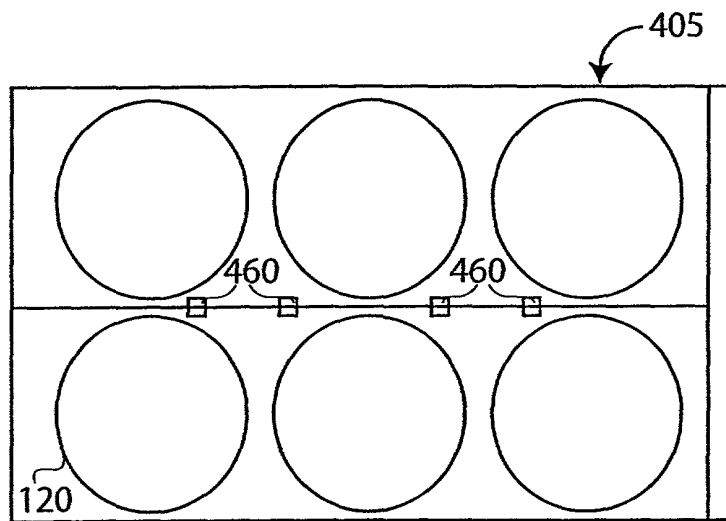


FIG. 4A

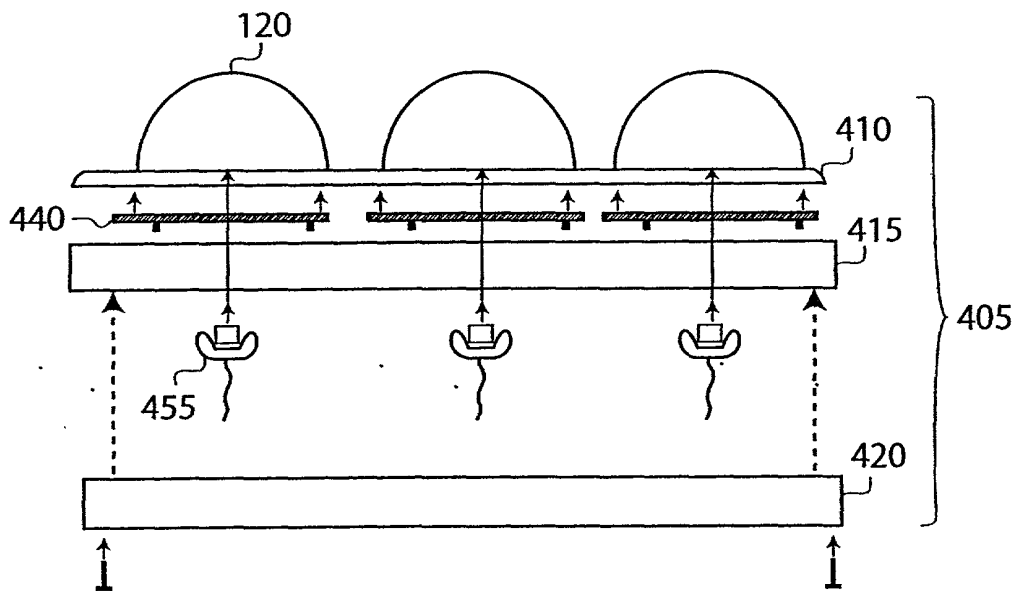


FIG. 4B

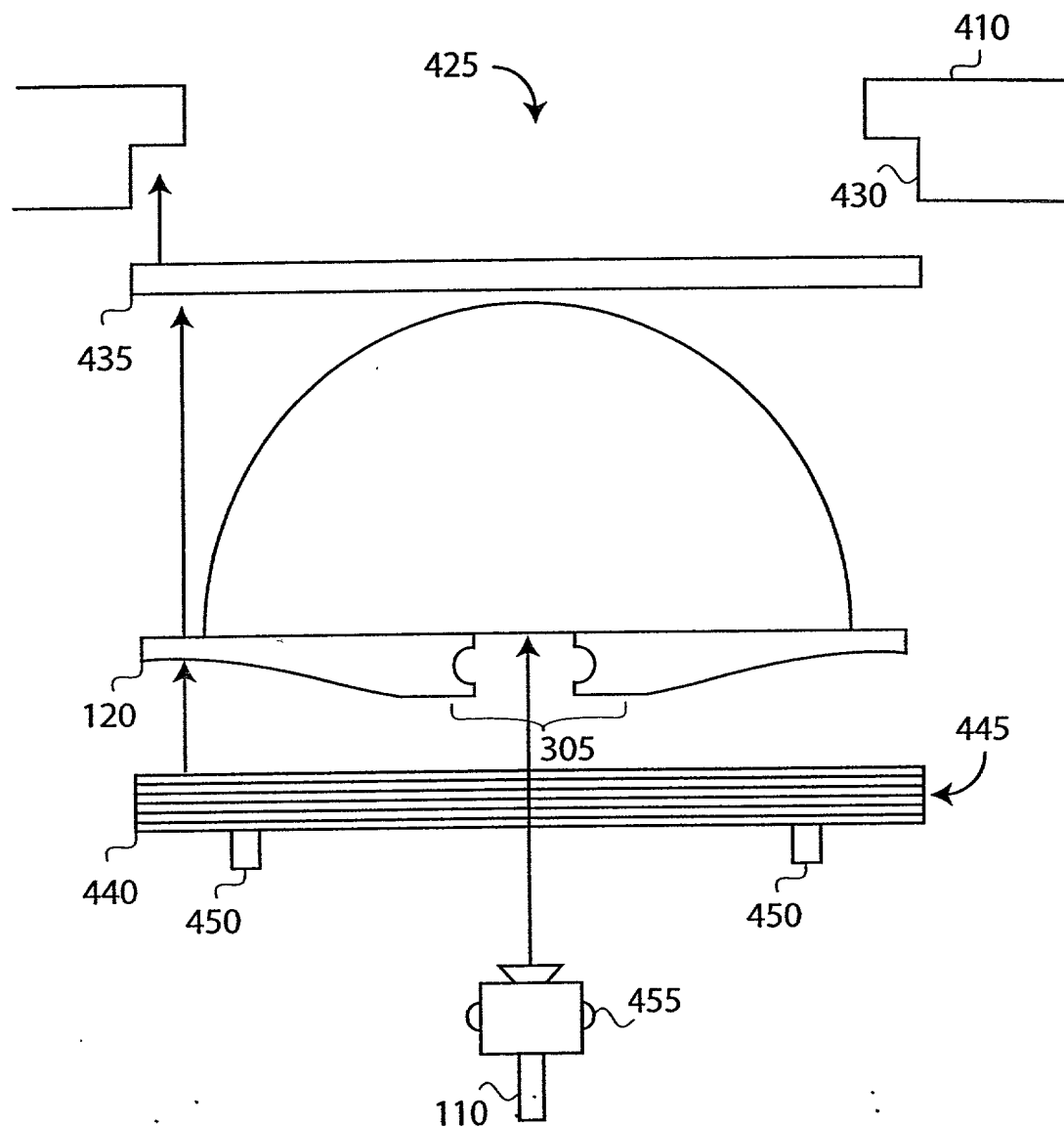


FIG. 4C

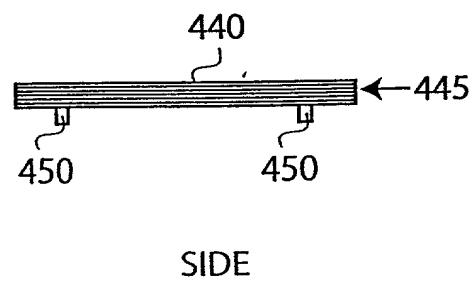
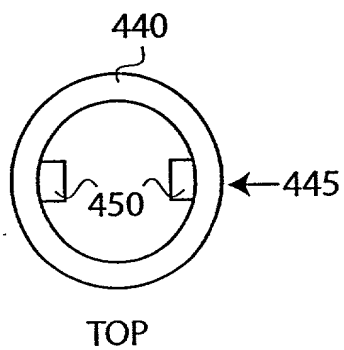


FIG. 4D

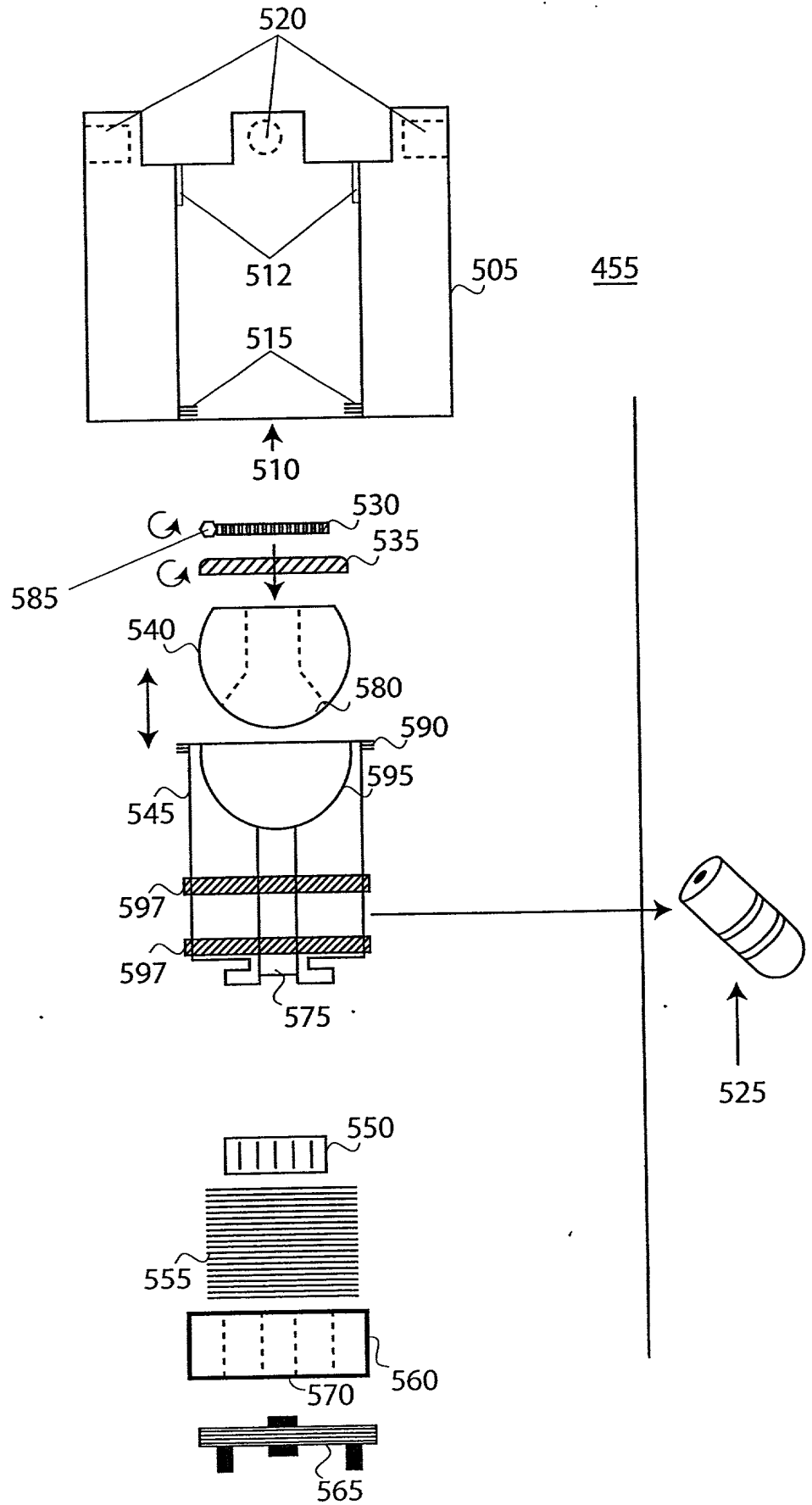


FIG. 5

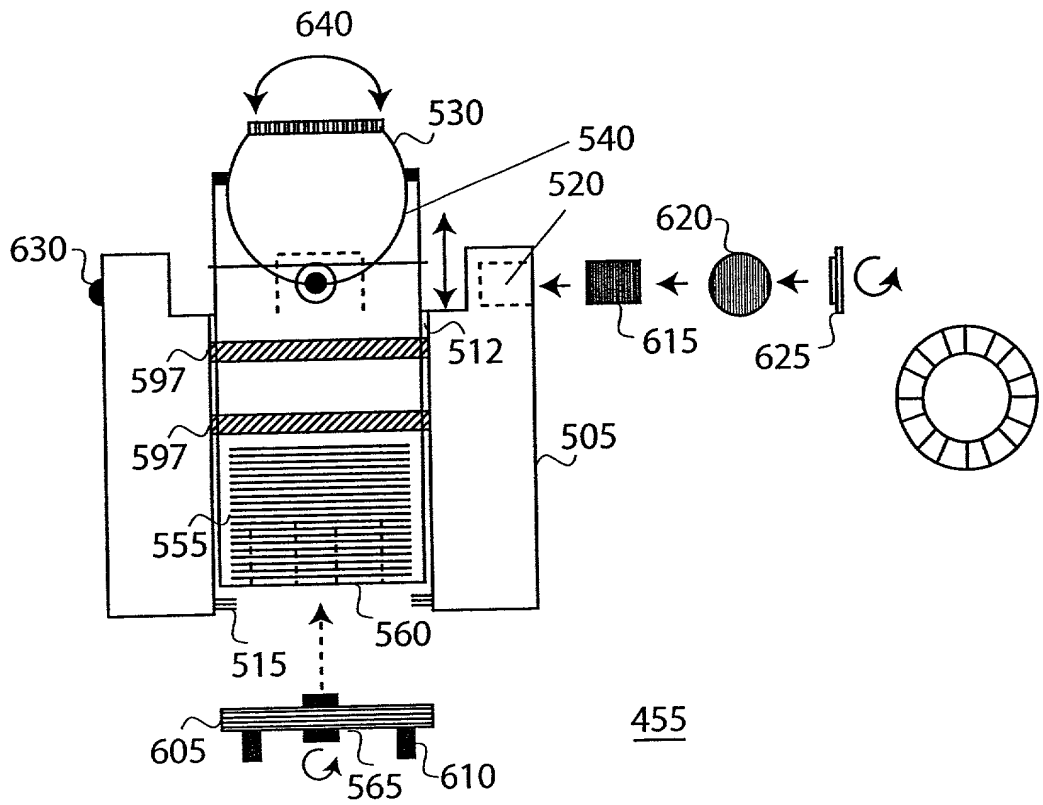


FIG. 6A

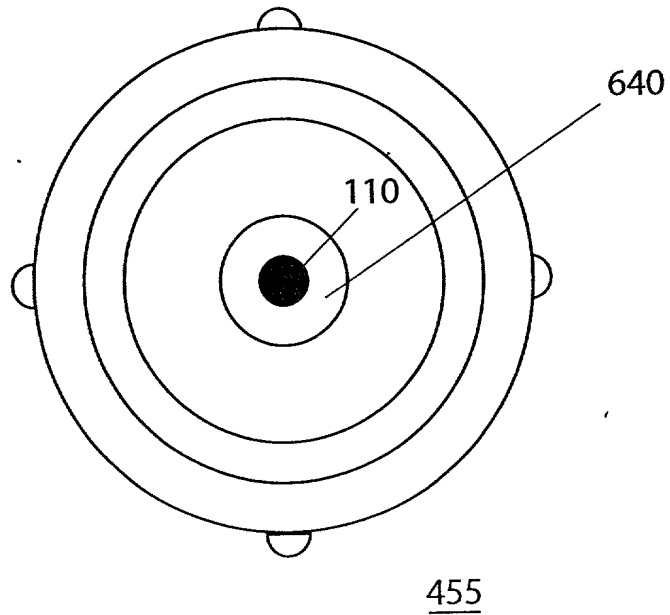


FIG. 6B

MIDDLE SECTION

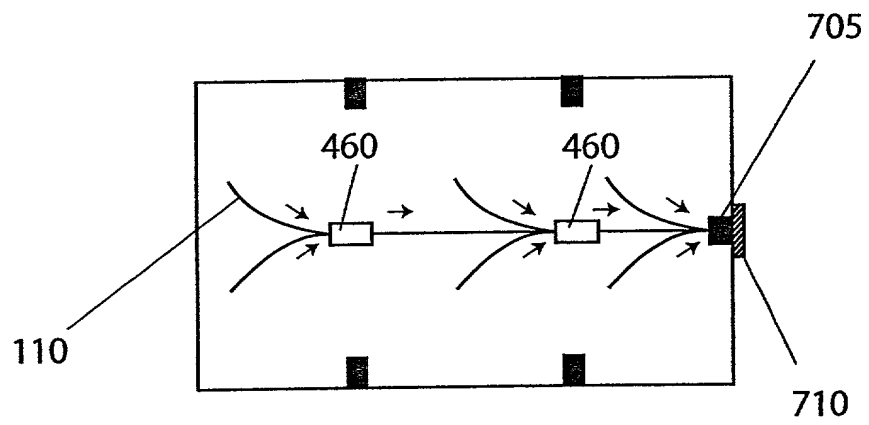


FIG.7A

BOTTOM PANEL

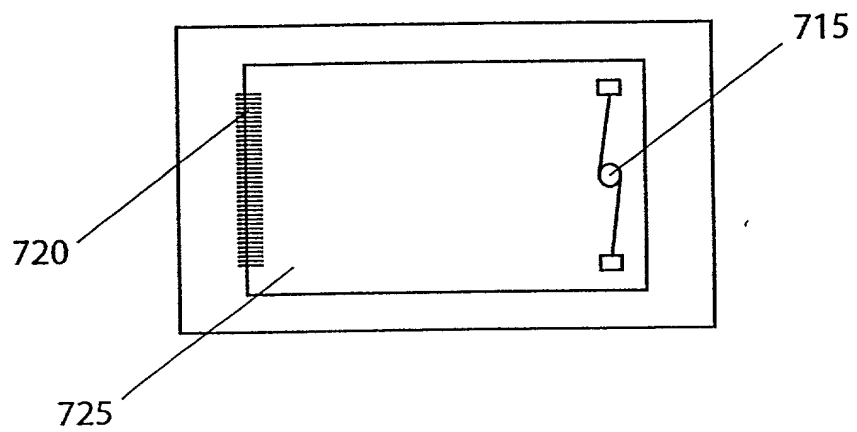


FIG.7B

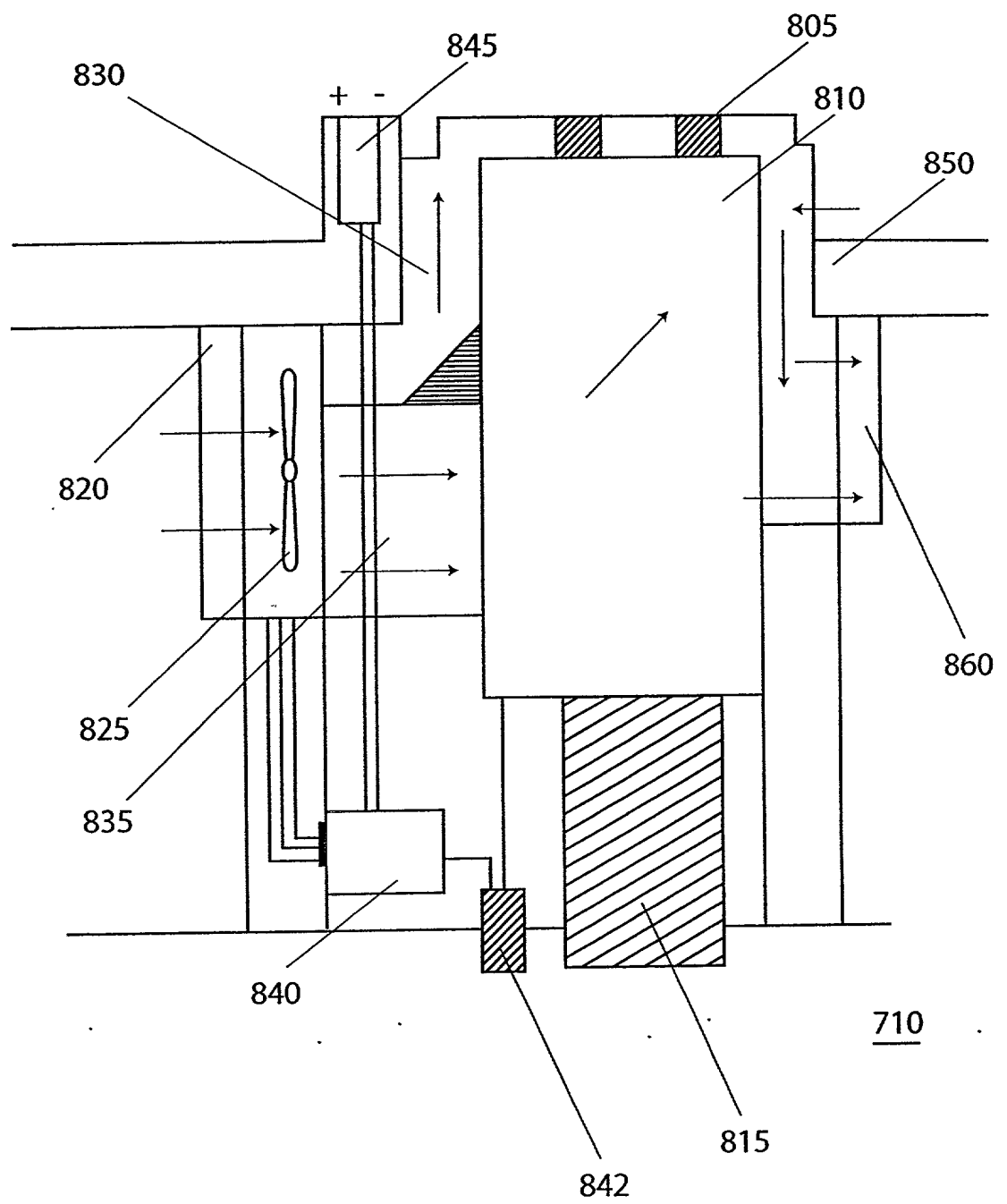


FIG. 8

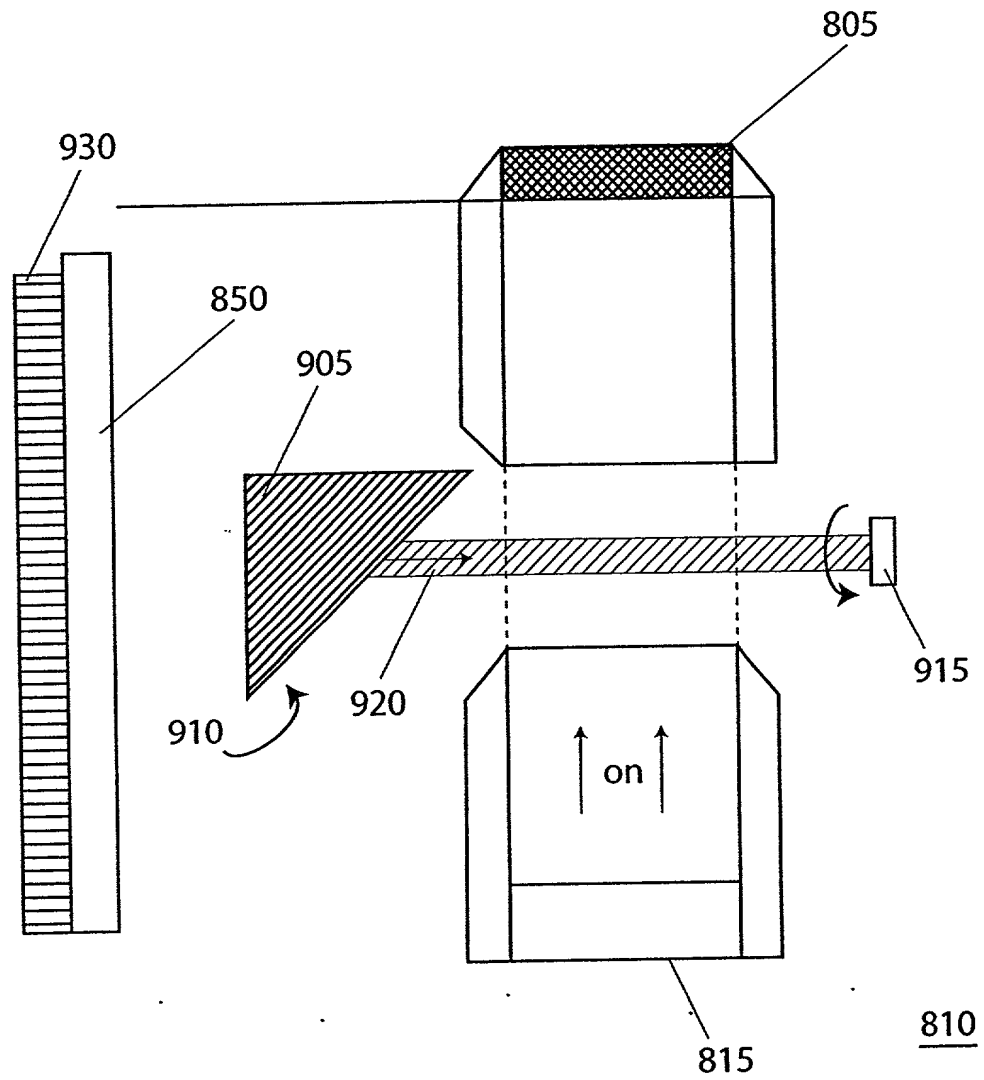


FIG. 9

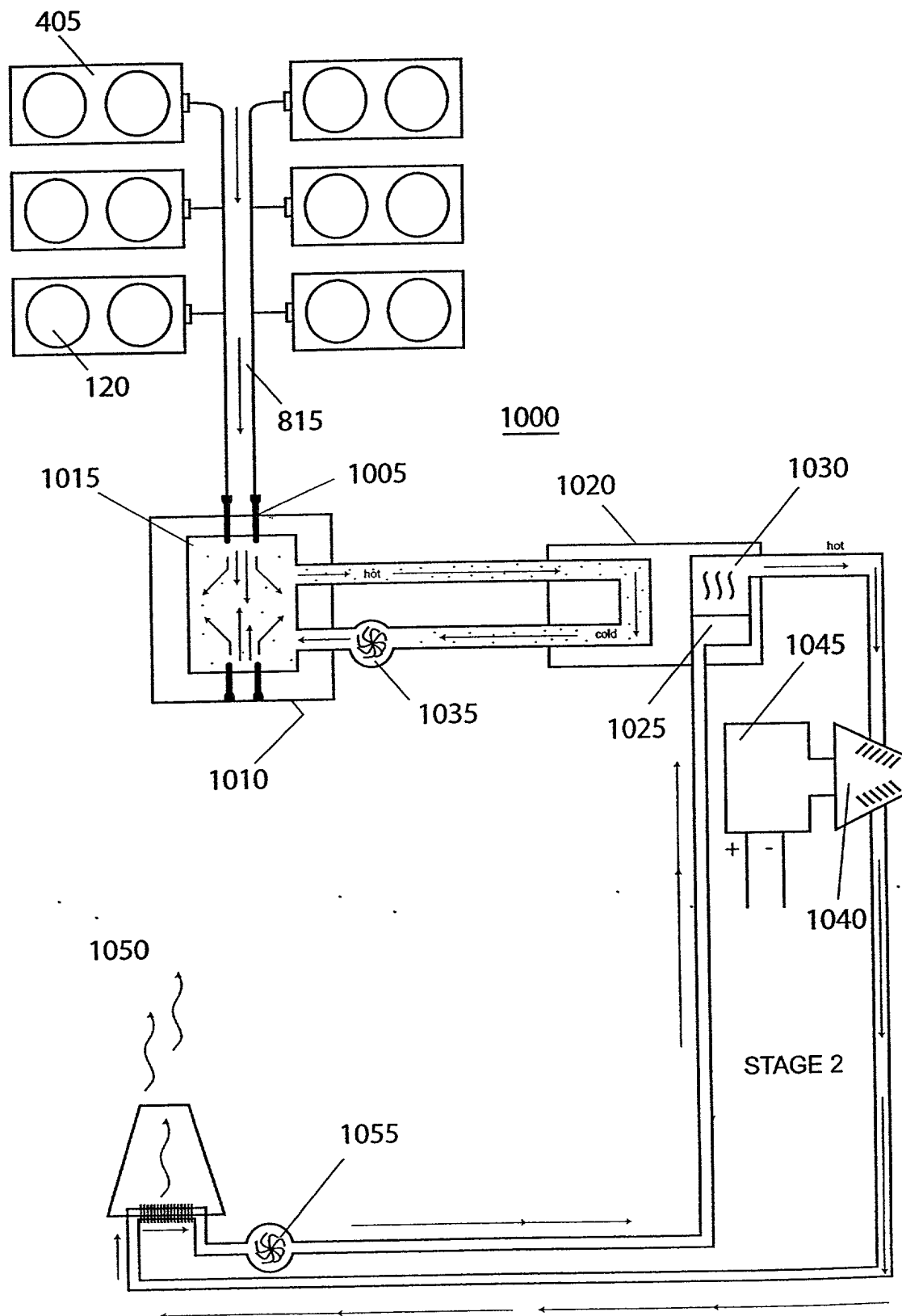


FIG. 10

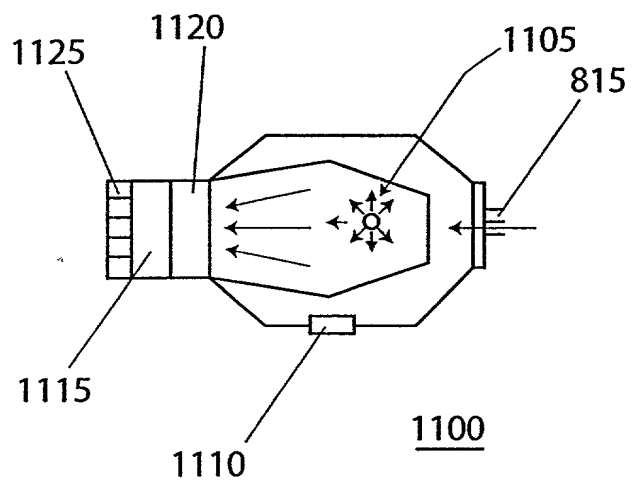


FIG. 11

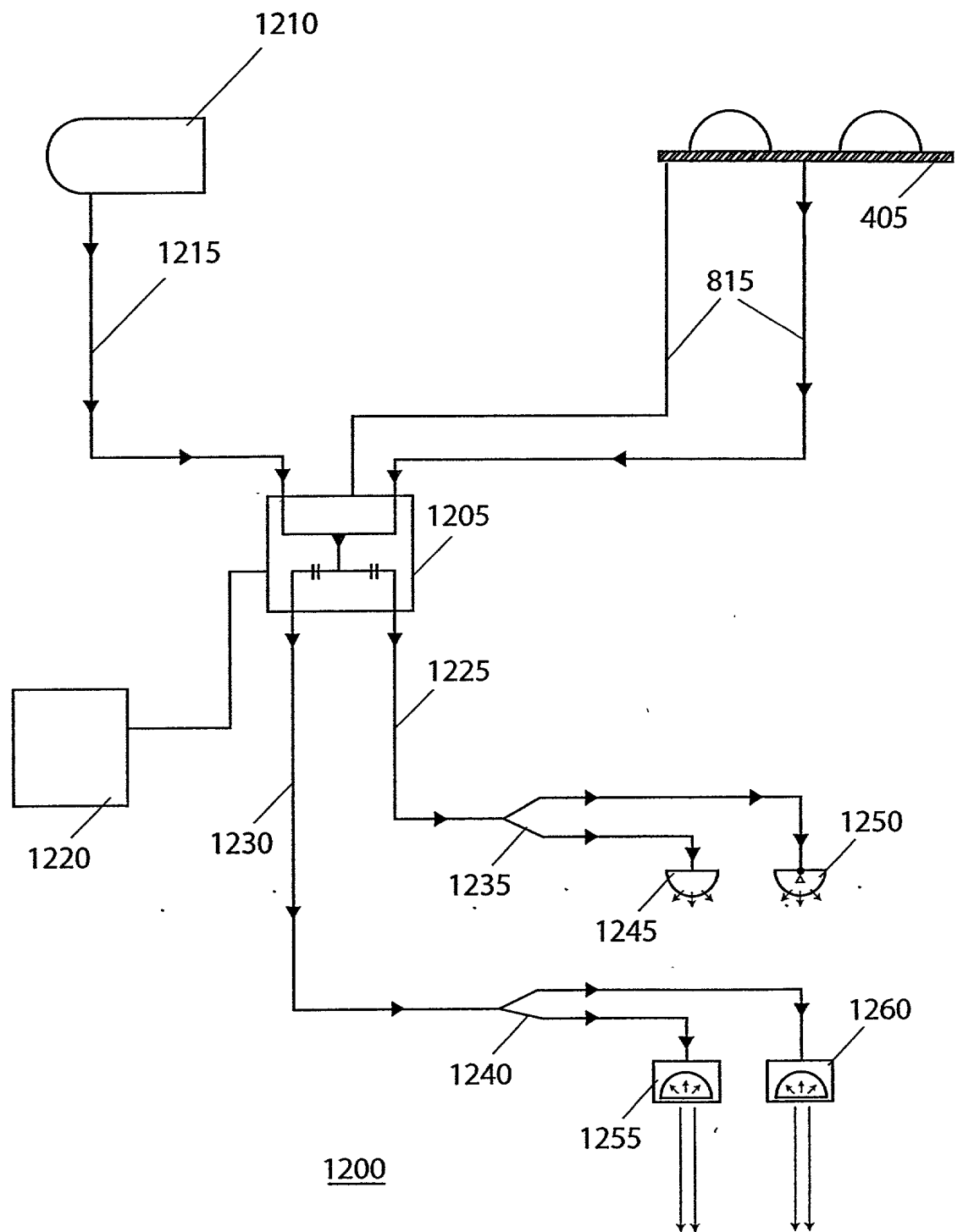


FIG. 12

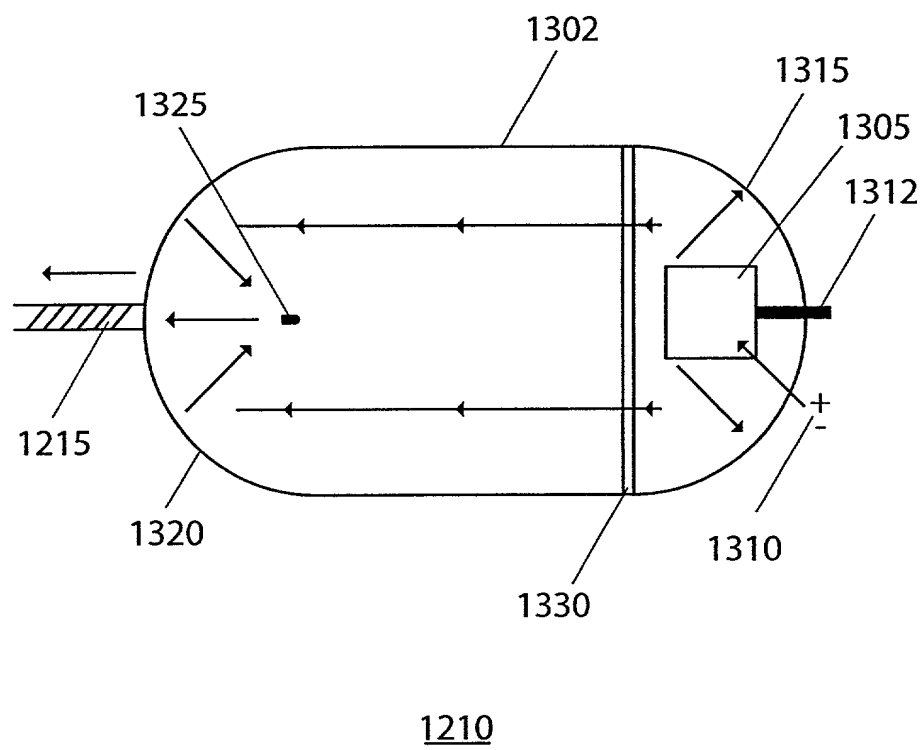


FIG. 13

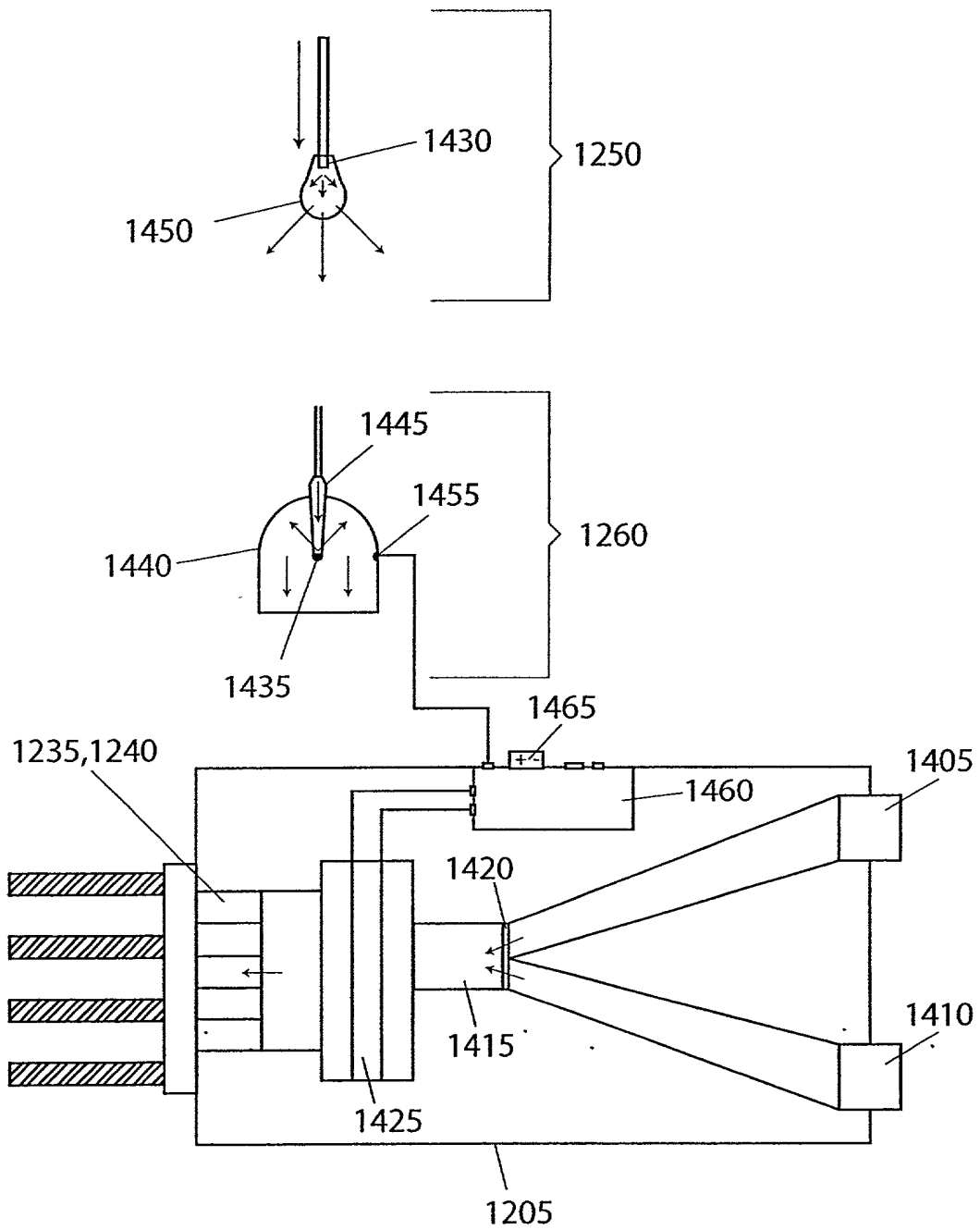


FIG. 14

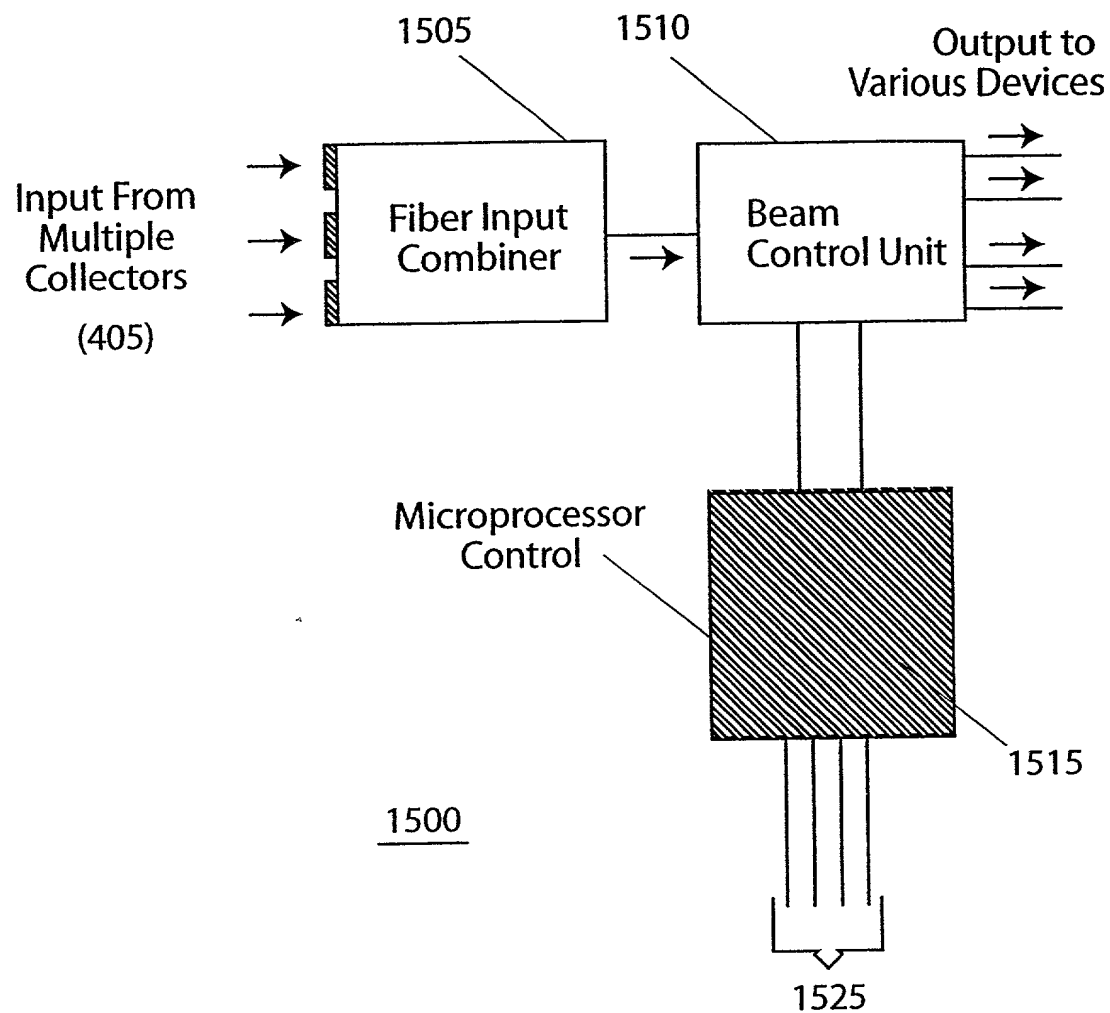


FIG. 15A

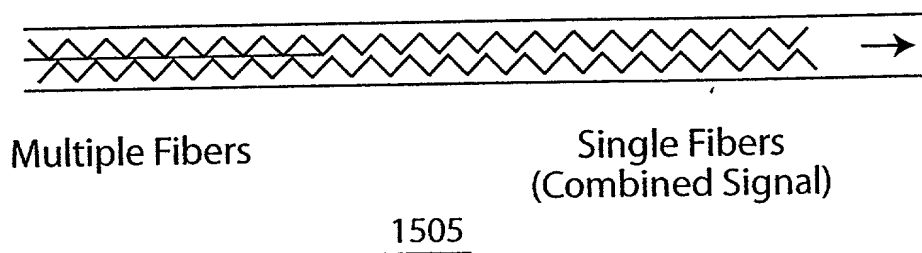


FIG. 15B

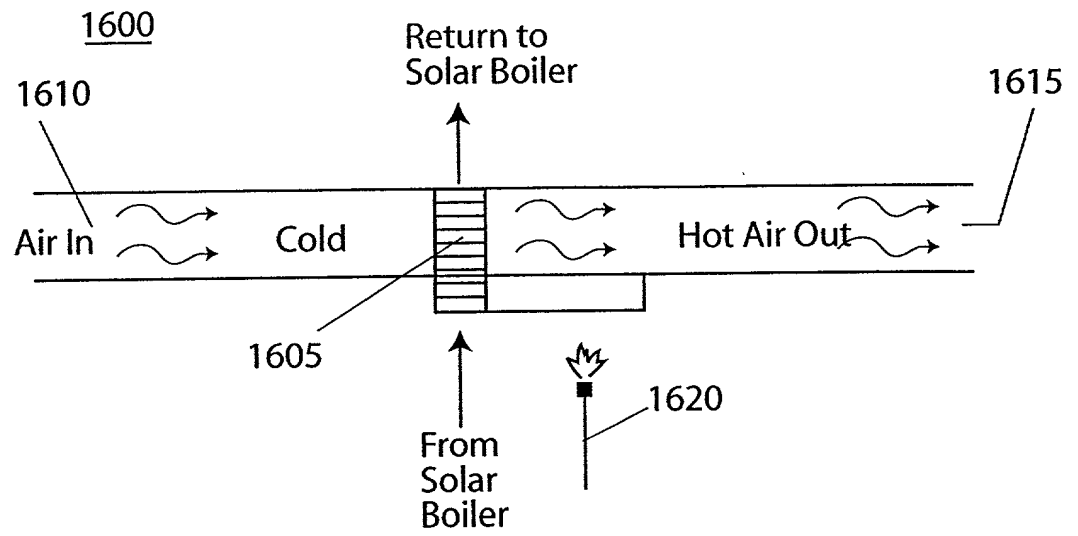


FIG. 16

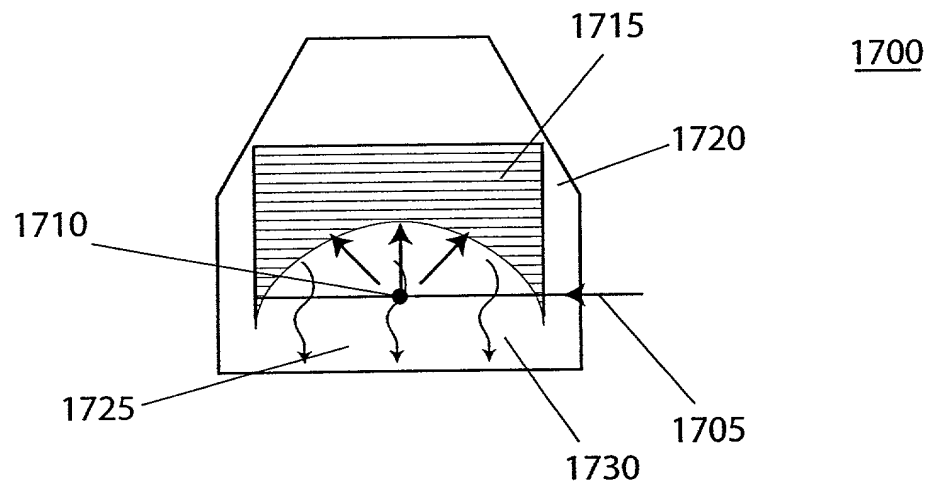


FIG. 17

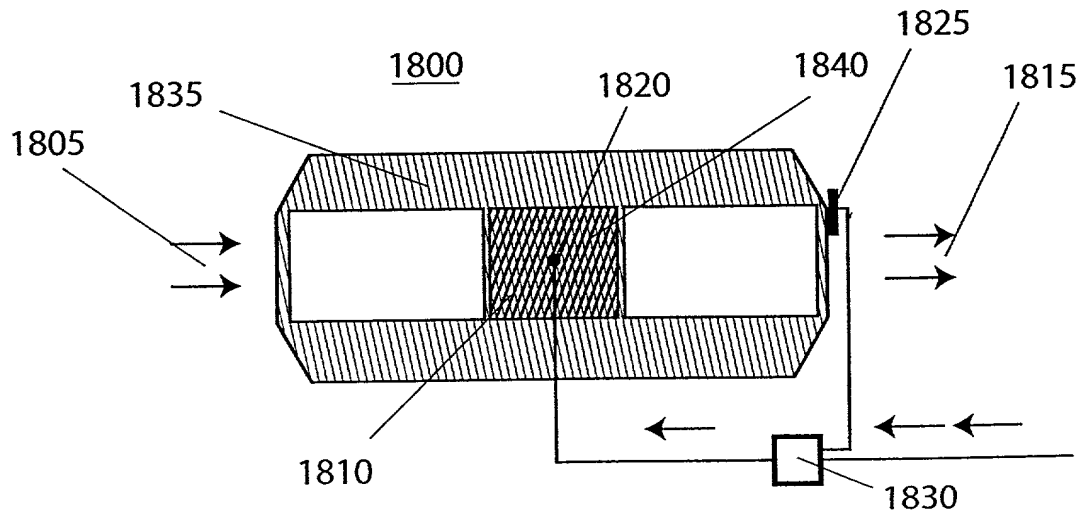


FIG. 18

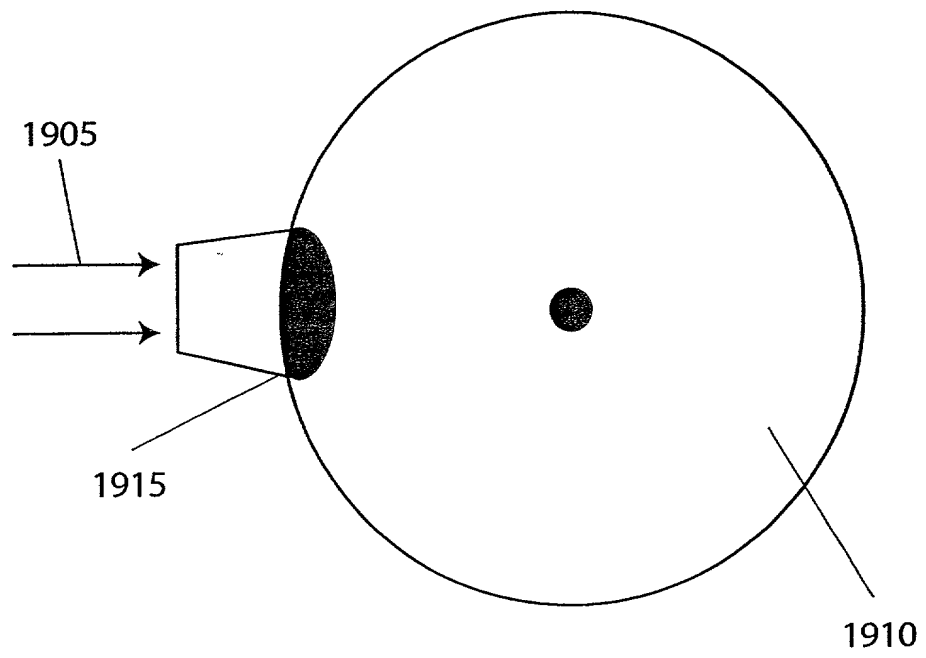


FIG. 19

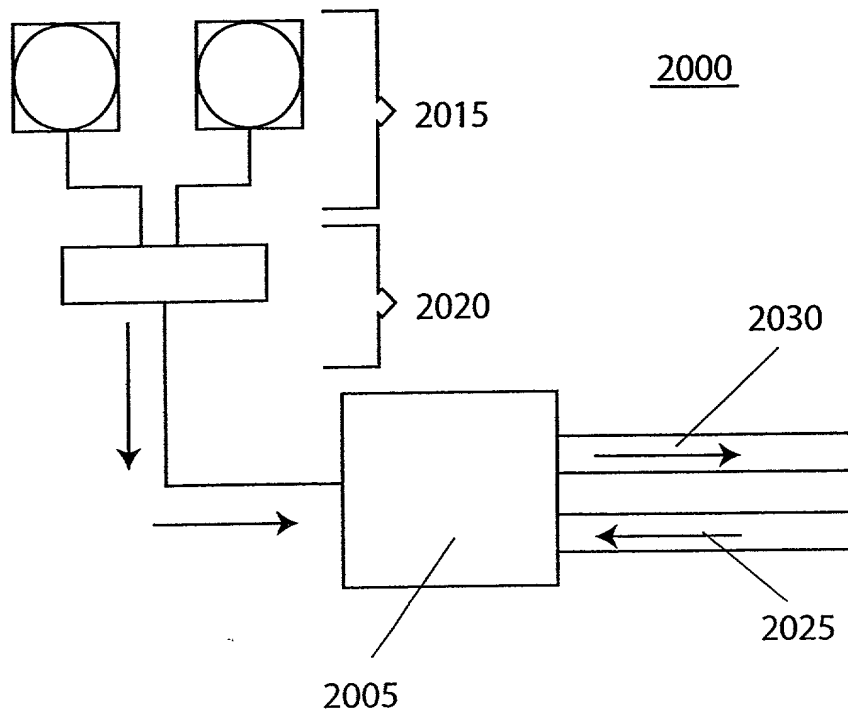


FIG. 20A

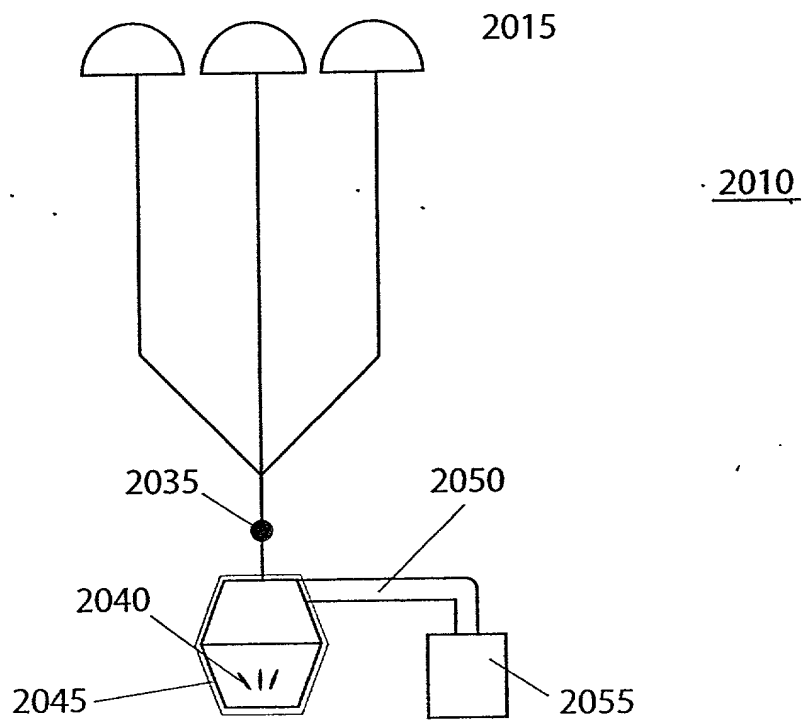


FIG. 20B

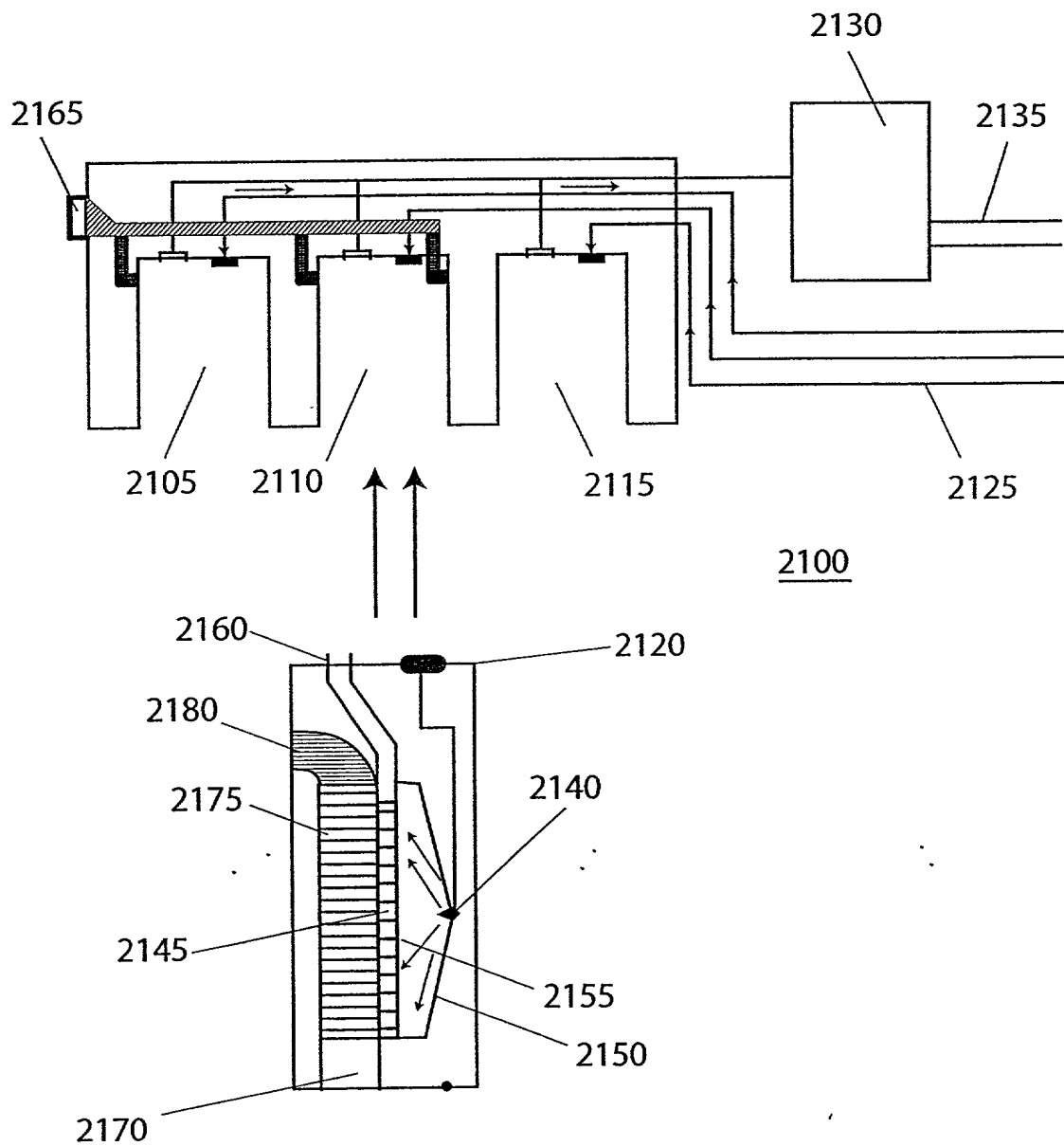


FIG. 21

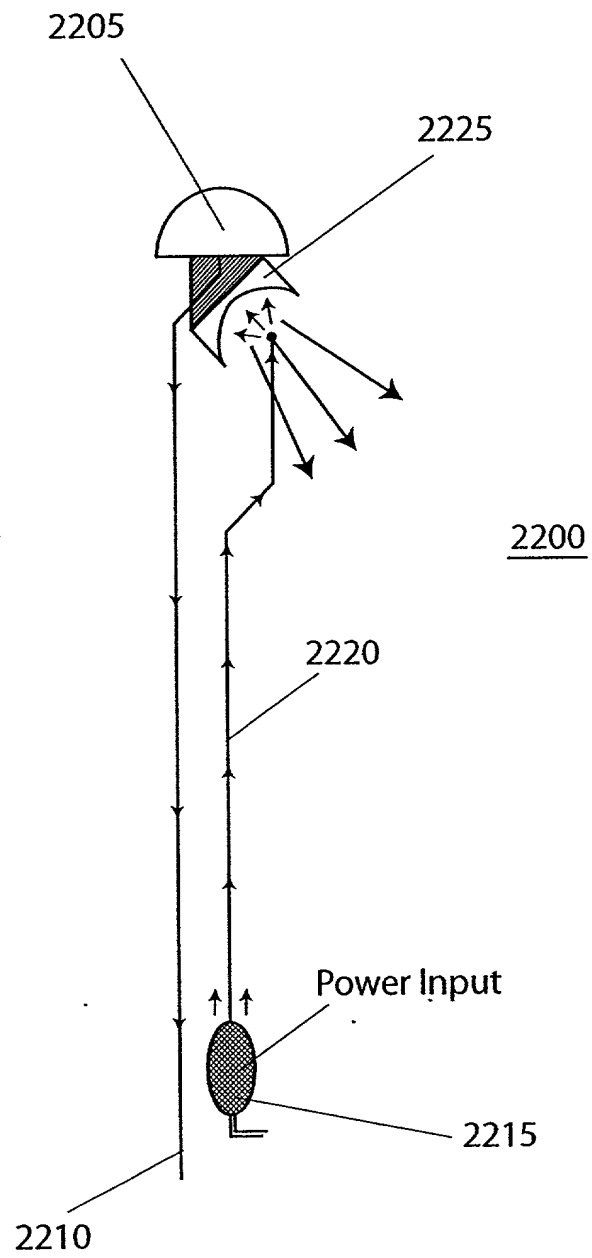


FIG. 22

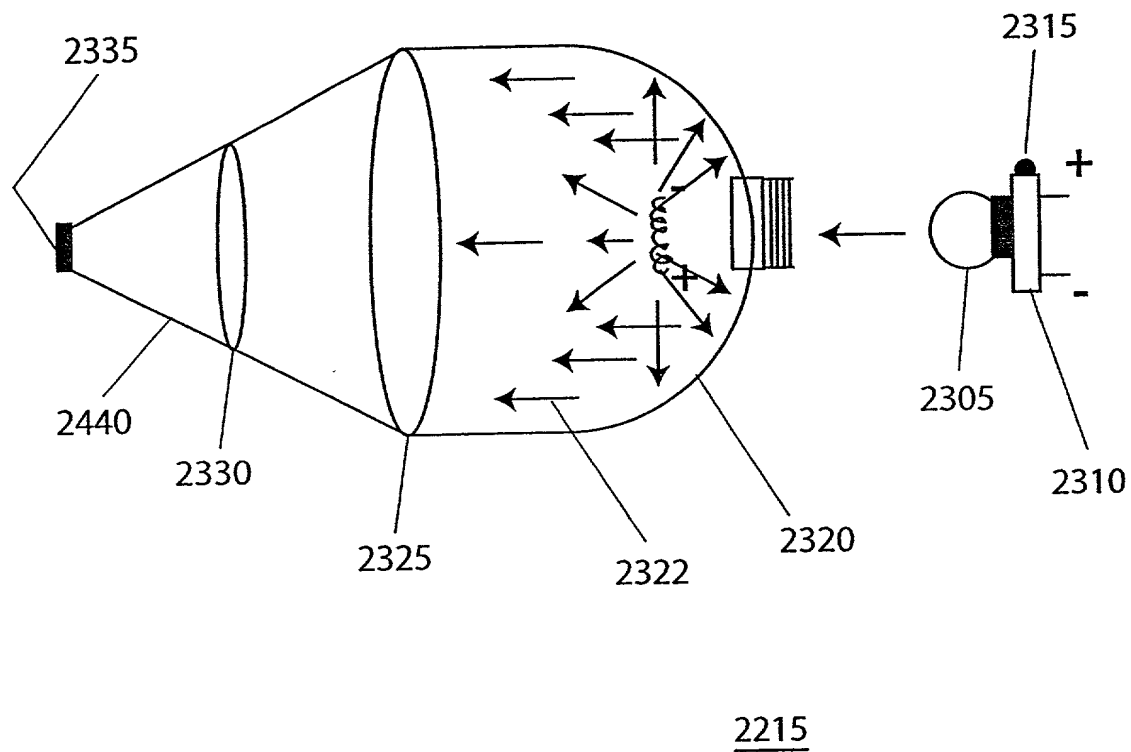


FIG. 23

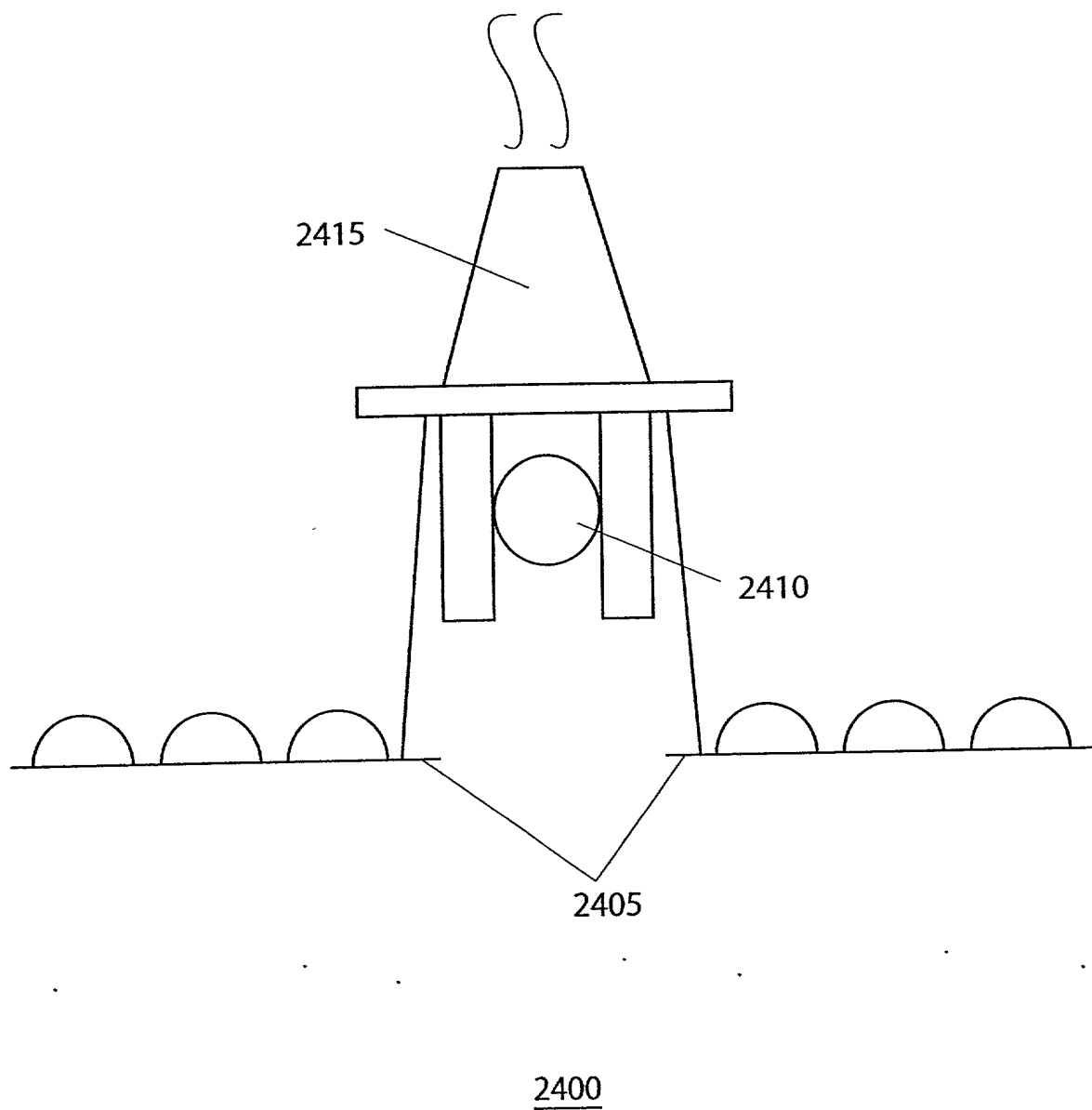


FIG. 24

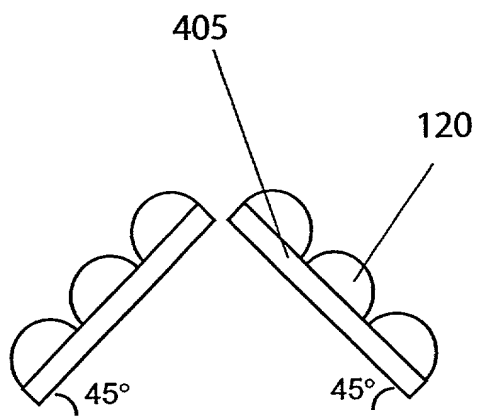


FIG. 25

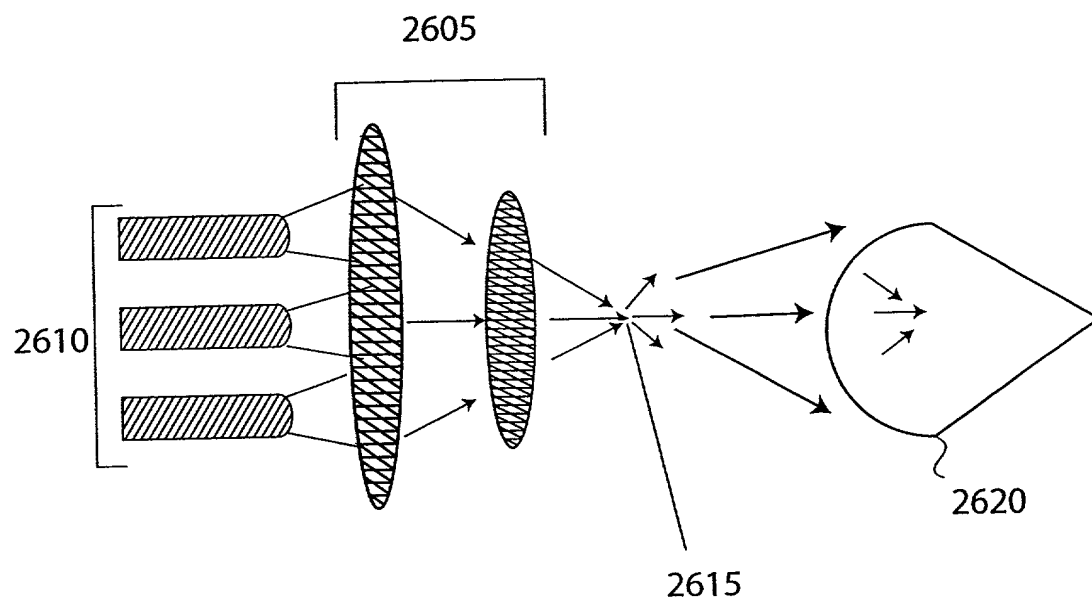


FIG. 26

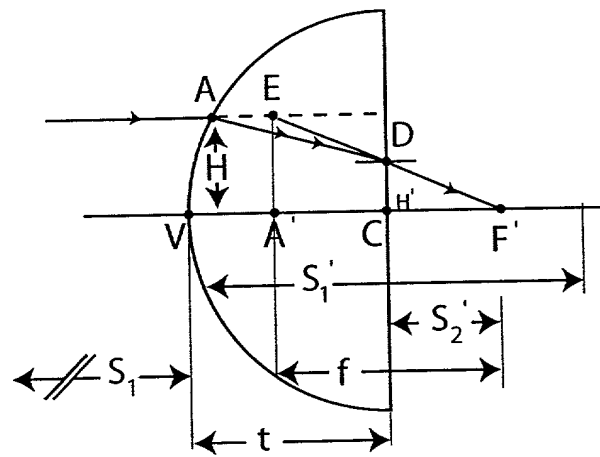


FIG. 27

$n_1 = 1.5$
 $n_2 = 1.5$
 $R = 0$
 $B = 0$

Note:
 Radius of surface one = thickness of lens
 Radius of surface two = infinity

Angles of Incidence and Refraction with Light Source at Infinity

1	2	3	4
Angle of incidence	Angle of refraction	Angle of incidence	Angle of refraction
0	0	0	0
1	0.70947641	0.29092239	0.40618171
2	1.41870911	0.58129209	0.81939699
3	2.12779324	0.87220676	1.22950176
4	2.83656162	1.16344388	1.64009148
5	3.54488836	1.45511167	2.05130314
6	4.25268139	1.74731862	2.46338205
7	4.95982416	2.04017839	2.87641155
8	5.66621284	2.33378152	3.29038424
9	6.37170389	2.62869161	3.70569743
10	7.07613468	2.92373148	4.12303426
11	7.77913468	3.22038632	4.54162635
12	8.481951716	3.51864824	4.960295152
13	9.182868247	3.817131753	5.38453846
14	9.882340561	4.117653439	5.809160796
15	10.58026861	4.42038311	6.236143235
16	11.27651469	4.72548311	6.665669932
17	11.97064327	5.032926728	7.097928376
18	12.66349092	5.343690979	7.533109649
19	13.35397213	5.646027866	7.971408696
20	14.04272922	5.93720782	8.4130246
21	14.73082116	6.221717843	8.858160887
22	15.4184847	6.508151527	9.307025725
23	16.09280009	6.797156948	9.759832422
24	16.7711282	7.08871799	10.21679995
25	17.44650311	7.383406885	10.67815138
26	18.11900413	7.680995871	11.14411817
27	18.78830438	7.980995871	11.61493638
28	19.4543137	8.283121525	12.09080699
29	20.1187848	8.588312152	12.57210891
30	20.7758415	8.89587137	13.05897137
31	21.42413849	9.20413849	13.55170338
32	22.06231465	9.51388165	14.05037932
33	22.72949111	9.82413849	14.55486243
34	23.37239818	10.13413849	15.06590332
35	24.01083854	10.44313849	15.58399503
36	24.64469043	10.75113849	16.10833062
37	25.27370747	11.05813849	16.63899253
38	25.89771861	12.0228139	17.18540308

Corresponding Geometric/Trigonometric Spherical Collector Variables

H	X	Y	h	Z
Incident ray height	Ray transmission dist	Y-H-h	Incident ray height	Focal Length
0	0	0	0	0
1	0.10471439	0.00428802	0.14853921	10.30094351
2	0.20936098	0.00857604	0.29707842	10.30177985
3	0.31401537	0.01286406	0.44559763	10.30261619
4	0.41863884	0.01715208	0.59411684	10.30345253
5	0.52329446	0.02144010	0.74263605	10.30428887
6	0.62791708	0.02572812	0.89115526	10.30512521
7	0.73253970	0.03001614	1.03967447	10.30596155
8	0.83716232	0.03430416	1.18819368	10.30679789
9	0.94178494	0.03859218	1.33671289	10.30763423
10	1.04640756	0.04288020	1.48523210	10.30847057
11	1.15103018	0.04716822	1.63375131	10.30930691
12	1.25565280	0.05145624	1.78227052	10.31014325
13	1.36027542	0.05574426	1.93078973	10.31097959
14	1.46489804	0.06003228	2.07930894	10.31181593
15	1.56952066	0.06432030	2.22782815	10.31265227
16	1.67414328	0.06860832	2.37634736	10.31348861
17	1.77876590	0.07289634	2.52486657	10.31432495
18	1.88338852	0.07718436	2.67338578	10.31516129
19	1.98801114	0.08147238	2.82190499	10.31599763
20	2.09263376	0.08576040	2.97042420	10.31683397
21	2.19725638	0.09004842	3.11894341	10.31767031
22	2.30187900	0.09433644	3.26746262	10.31850665
23	2.40650162	0.09862446	3.41598183	10.31934299
24	2.51112424	0.10291248	3.56450104	10.32017933
25	2.61574686	0.10720050	3.71302025	10.32101567
26	2.72036948	0.11148852	3.86153946	10.32185201
27	2.82499210	0.11577654	4.01005867	10.32268835
28	2.92961472	0.12006456	4.15857788	10.32352469
29	3.03423734	0.12435258	4.30709709	10.32436103
30	3.13886000	0.12864060	4.45561630	10.32519737
31	3.24348262	0.13292862	4.60413551	10.32603371
32	3.34810524	0.13721664	4.75265472	10.32687005
33	3.45272786	0.14150466	4.90117393	10.32770639
34	3.55735048	0.14579268	5.04969314	10.32854273
35	3.66197310	0.15008070	5.19821235	10.32937907
36	3.76659572	0.15436872	5.34673156	10.33021541
37	3.87121834	0.15865674	5.49525077	10.33105175
38	3.97584096	0.16294476	5.64376998	10.33188809

FIG. 28B

39	26.51652792	12.48347208	17.75977813	3.775922346	4.652873769	1.032323368	2.713598778	8.577625598
40	27.12593451	12.87006549	18.29683594	3.836725358	4.596266559	1.050138365	2.80667073	8.489441593
41	27.73772444	13.26226756	18.86700997	3.936354174	4.528357481	1.06738645	2.86967724	8.394637225
42	28.33971056	13.66028944	19.44462887	4.014783638	4.458868933	1.083481639	2.931101999	8.302857795
43	28.93565242	14.06434738	20.03211626	4.09190016	4.38812221	1.099317773	2.992672387	8.207981393
44	29.52333624	14.4746376	20.6298918	4.167950223	4.316038802	1.114167556	3.053782667	8.111601731
45	30.10853477	14.89146523	21.23659217	4.242640687	4.242640687	1.128020702	3.114457985	8.013358883
46	30.68501525	15.31498475	21.85807206	4.316038802	4.167950223	1.14393875	3.174644927	7.913894634
47	31.25453938	15.74566062	22.48940525	4.38812221	4.09190016	1.159770606	3.234411604	7.813564458
48	31.81686359	16.18313671	23.13288353	4.458868933	4.014783638	1.175592716	3.293747774	7.709818333
49	32.37173752	16.62826248	23.78902946	4.528357481	3.936354174	1.191512123	3.352664765	7.604347258
50	32.91897073	17.08109297	24.45837482	4.596266559	3.856725358	1.185900747	3.411175912	7.495766392
51	33.45811127	17.54188873	25.14148516	4.662875769	3.775922346	1.19379442	3.469296306	7.382216397
52	33.98908421	18.01091579	25.83884998	4.72804522	3.693988852	1.201021345	3.527043176	7.268199703
53	34.51153446	18.48844554	26.55138696	4.79181306	3.610890139	1.20737287	3.584435774	7.153137757
54	35.0232454	18.9747546	27.27444409	4.854101966	3.528711514	1.212606263	3.641495703	7.037383857
55	35.5298753	19.4701247	28.0238802	4.914912266	3.441458618	1.216665268	3.698246957	6.921425671
56	36.02515758	19.97484242	28.78517664	4.97425435	3.355157421	1.219509448	3.754716088	6.805950715
57	36.51080101	20.48919899	29.56402228	5.032023408	3.26783421	1.221091051	3.810932356	6.691181525
58	36.98650999	21.01349001	30.36203495	5.088288577	3.179515585	1.221366883	3.869279208	6.576456346
59	37.45198491	21.54801509	31.17915632	5.140303804	3.096238449	1.22036883	3.92737951	6.462035128
60	37.90692247	22.09307733	32.01657818	5.196152423	3	1.21751475	3.979598827	6.348161618
61	38.35101617	22.64898383	32.87524766	5.247718243	2.908857721	1.213759416	4.033958827	6.234957084
62	38.78956771	23.21604329	33.75617321	5.297683357	2.816829377	1.208228835	4.089472707	6.118879931
63	39.2043259	23.79456741	34.66043166	5.346090145	2.739029298	1.201093507	4.146916508	6.00402213
64	39.61513065	24.38886953	35.58917644	5.392764278	2.662228881	1.192286419	4.204778665	5.88959764
65	40.01273673	24.98726327	36.54364741	5.437846722	2.59370937	1.181734611	4.256112111	5.776851065
66	40.39793637	25.60205663	37.52182446	5.481272746	2.540419858	1.169561359	4.311911387	5.664313368
67	40.77041554	26.22598446	38.53232143	5.52029121	2.443868771	1.158208297	4.367943824	5.551154499
68	41.12986146	26.87013854	39.57372791	5.563103127	2.34769596	1.146208089	4.424283039	5.437222237
69	41.47596348	27.52403652	40.64733468	5.601482559	2.25027697	1.13474023	4.481008956	5.322722257
70	41.80841397	28.19158203	41.75901862	5.638155725	2.05212086	1.12047023	4.538206142	5.215940564
71	42.12992931	28.87309069	42.8945316	5.673111454	1.953408927	1.099494983	4.59689487	5.104803071
72	42.45111585	29.56884915	44.07422388	5.706395998	1.854101966	1.077142667	4.654395533	4.994797949
73	42.72846602	30.27915398	45.29473747	5.737828536	1.754320228	1.051943565	4.71339516	4.880728941
74	42.99570934	31.00429066	46.55906763	5.767570176	1.653824135	1.024233376	4.773683813	4.768348343
75	43.254636	31.7445364	47.87064206	5.795354998	1.552914271	0.99386363	4.834787225	4.651012817
76	43.49984092	32.50015908	49.2342443	5.82174838	1.451531374	0.96076773	4.897041221	4.538574432
77	43.72858392	33.27141608	50.6503155	5.846202389	1.349706326	0.92473237	4.96592637	4.422088657
78	43.94144685	34.03635315	52.13201871	5.86883604	1.247470145	0.885627771	5.025600235	4.307131564
79	44.13819371	34.86180329	53.67993506	5.89885604	1.144833972	0.84328357	5.079226038	4.190314823
80	44.31861435	35.68138565	55.30388401	5.908846518	1.041889066	0.797327063	5.126525154	4.073332514
81	44.48249556	36.51720444	57.0139464	5.926130044	0.93860679	0.748160693	5.166866425	3.953115
82	44.62965209	37.37034791	58.82298545	5.941628412	0.83602826	0.694976354	5.23115369	3.84318858
83	44.75991262	38.24008738	60.74787282	5.95527691	0.73121666	0.63757922	5.30838769	3.739222259
84	44.87123267	39.12887633	62.81815154	5.967131372	0.62717078	0.57629164	5.379037746	3.63949223
85	44.96915043	40.02084937	65.04030452	5.977168189	0.525294456	0.51070546	5.456954827	3.545954827
86	45.04787751	40.9212249	67.50093298	5.983384902	0.418338842	0.439274133	5.537894056	3.463107569
87	45.1092096	41.8907904	70.25444896	5.991777209	0.326165912	0.36216887	5.622167014	3.38674821
88	45.15307198	42.84692802	73.45196304	5.993444962	0.20939698	0.281659112	5.710118097	3.31611555
89	45.17941097	43.82038803	77.42303777	5.99086171	0.104714439	0.19422544	5.802122419	3.24861355
90	45.18819423	44.81185777	83.4397495	5.985963677	3	0.10048794	5.893596377	3.187600356
						3.63138E-16		3.09039241

FIG. 28C

Angles of Incidence and Refraction with Light Source at Infinity

Angle of Incidence	Surface D1		Surface D2	
	1	2	3	4
Angle of refraction	Angle of refraction	Angle of refraction	Angle of refraction	Angle of refraction
-68	-41.12866146	48.87013854	#NUM!	#NUM!
-67	-40.77041554	48.22958446	#NUM!	#NUM!
-66	-40.39799637	47.60200363	#NUM!	#NUM!
-65	-40.01272673	46.98726327	#NUM!	#NUM!
-64	-39.61513045	46.38486933	#NUM!	#NUM!
-63	-39.20543259	45.79456741	#NUM!	#NUM!
-62	-38.78393671	45.21604329	#NUM!	#NUM!
-61	-38.35101617	44.64898383	82.14054576	82.14054576
-60	-37.90692247	44.09307733	78.76321707	78.76321707
-59	-37.45198491	43.54801509	76.20499842	76.20499842
-58	-36.98630999	43.01349001	74.6663151	74.6663151
-57	-36.51080101	42.48919899	73.14839304	73.14839304
-56	-36.02515758	41.97484242	71.6710145	71.6710145
-55	-35.52987253	41.4701247	70.2379904	70.2379904
-54	-35.0352454	40.9747546	68.8529697	68.8529697
-53	-34.51153446	40.48844534	67.5099632	67.5099632
-52	-33.98508421	40.01091579	66.20984632	66.20984632
-51	-33.43811127	39.54188873	64.9534861	64.9534861
-50	-32.87173152	39.08109297	63.7420228	63.7420228
-49	-32.37173152	38.62826248	62.57010129	62.57010129
-48	-31.81666329	38.18313671	61.43735721	61.43735721
-47	-31.2453938	37.74546062	60.34590497	60.34590497
-46	-30.68501523	37.31498475	59.29428737	59.29428737
-45	-30.1083477	36.89146523	58.2834442	58.2834442
-44	-29.5233624	36.4746376	57.3064963	57.3064963
-43	-28.9364542	36.06484718	56.36488599	56.36488599
-42	-28.33971056	35.66028944	55.45614682	55.45614682
-41	-27.73773244	35.26226756	54.58742573	54.58742573
-40	-27.12993451	34.87006549	53.76007149	53.76007149
-39	-26.51652792	34.48347208	52.94582506	52.94582506
-38	-25.89771861	34.10228139	52.1526514	52.1526514
-37	-25.27370747	33.72629233	51.3031057	51.3031057
-36	-24.64460043	33.35550957	50.48817757	50.48817757
-35	-24.01083854	32.98914146	49.7023421	49.7023421
-34	-23.37298818	32.62760182	48.9468337	48.9468337
-33	-22.72949111	32.27050889	48.2163384	48.2163384
-32	-22.08231463	31.91768335	47.51491266	47.51491266
-31	-21.43104183	31.56895817	46.8401966	46.8401966
-30	-20.7758415	31.2241585	46.18069546	46.18069546

Corresponding Geometric/Trigonometric Spherical Collector Variables

(Included angle with respect to the horizon)				
X	M	w	L	Y
0	6	180	1.11755E-15	8.41762E-16
0.104714439	5.999086171	179	0.157194083	0.117238501
0.20939698	5.996344982	178	0.310355994	0.229233542
0.314015737	5.991777209	177	0.460325016	0.346590608
0.418538842	5.985384302	176	0.60574444	0.49276738
0.523934456	5.977168189	175	0.750013841	0.537643298
0.62717078	5.967131372	174	0.890316832	0.631718408
0.73121606	5.955273691	173	1.027818185	0.722311078
0.835038606	5.941608412	172	1.162665756	0.809015094
0.93860679	5.926130044	171	1.294992188	0.892200884
1.041889066	5.908846518	170	1.42491642	0.972035996
1.144839172	5.889763101	169	1.552545029	1.048668417
1.247410145	5.868885604	168	1.677973428	1.122235743
1.34978326	5.846220389	167	1.801286937	1.192862322
1.451531374	5.821774358	166	1.922561735	1.260674541
1.552914271	5.795554938	165	2.041865726	1.325772572
1.653824135	5.767570176	164	2.159259304	1.388260233
1.754240228	5.737828396	163	2.274796052	1.448231122
1.854101966	5.706339098	162	2.388523365	1.505772149
1.953408927	5.673111454	161	2.50048302	1.560964092
2.05212086	5.638155725	160	2.610711684	1.613882113
2.150207697	5.601482559	159	2.719241582	1.664596213
2.24763956	5.563103127	158	2.826099913	1.713171656
2.344386771	5.523029121	157	2.931311256	1.759669933
2.440419858	5.481277746	156	3.034893818	1.804146209
2.53570957	5.437846722	155	3.136870949	1.846635444
2.630228881	5.392764278	154	3.237251033	1.887248885
2.723942998	5.346039145	153	3.336047849	1.92697235
2.816829977	5.297685557	152	3.433270797	1.965860318
2.908837721	5.247718243	151	3.528957116	1.997967503
3	5.196152423	150	3.623020086	2.031326914
3.090228449	5.140038804	149	3.715539215	2.062975621
3.179515585	5.082388577	148	3.806540412	2.092947814
3.26783421	5.023023408	147	3.895966137	2.121275964
3.355157421	4.974225455	146	3.983833652	2.147959078
3.441489518	4.914912266	145	4.070166581	2.173121337
3.526711314	4.854101966	144	4.154848633	2.196695212
3.610890139	4.79181306	143	4.238080764	2.218738598
3.693968852	4.728064522	142	4.31964984	2.239276418

(Included angle with respect to the horizon)				
T	S	Delta Q		
-6	#NUM!	#NUM!	#NUM!	#NUM!
-5.88184767	#NUM!	#NUM!	#NUM!	#NUM!
-5.76700942	#NUM!	#NUM!	#NUM!	#NUM!
-5.653186691	#NUM!	#NUM!	#NUM!	#NUM!
-5.546107563	#NUM!	#NUM!	#NUM!	#NUM!
-5.43952489	#NUM!	#NUM!	#NUM!	#NUM!
-5.335212654	#NUM!	#NUM!	#NUM!	#NUM!
-5.23263832	74.83912566	74.83912566	74.83912566	74.83912566
-5.132059318	51.90479777	51.90479777	51.90479777	51.90479777
-5.03392936	41.91235506	41.91235506	41.91235506	41.91235506
-4.93681623	35.56352932	35.56352932	35.56352932	35.56352932
-4.841094884	31.88996488	31.88996488	31.88996488	31.88996488
-4.746460861	28.86604936	28.86604936	28.86604936	28.86604936
-4.653355157	26.0943249	26.0943249	26.0943249	26.0943249
-4.561099817	24.37666661	24.37666661	24.37666661	24.37666661
-4.46978336	22.97009188	22.97009188	22.97009188	22.97009188
-4.379309943	21.98843794	21.98843794	21.98843794	21.98843794
-4.289597414	20.40684094	20.40684094	20.40684094	20.40684094
-4.200566949	19.35688594	19.35688594	19.35688594	19.35688594
-4.113147361	18.42073926	18.42073926	18.42073926	18.42073926
-4.02727453	17.57767346	17.57767346	17.57767346	17.57767346
-3.943886346	16.81189317	16.81189317	16.81189317	16.81189317
-3.862991471	16.1112275	16.1112275	16.1112275	16.1112275
-3.785339768	15.46565889	15.46565889	15.46565889	15.46565889
-3.71126337	14.86771761	14.86771761	14.86771761	14.86771761
-3.641191278	14.31097317	14.31097317	14.31097317	14.31097317
-3.574551793	13.79022555	13.79022555	13.79022555	13.79022555
-3.51207193	13.30115625	13.30115625	13.30115625	13.30115625
-3.452875239	12.84014592	12.84014592	12.84014592	12.84014592
-3.396755094	12.40975084	12.40975084	12.40975084	12.40975084
-3.344825508	11.99032287	11.99032287	11.99032287	11.99032287
-3.296302813	11.58002813	11.58002813	11.58002813	11.58002813
-3.251340743	11.17707449	11.17707449	11.17707449	11.17707449
-3.209534078	10.78222833	10.78222833	10.78222833	10.78222833
-3.170831646	10.40334056	10.40334056	10.40334056	10.40334056
-3.134824856	10.03900379	10.03900379	10.03900379	10.03900379
-3.101470029	9.68962432	9.68962432	9.68962432	9.68962432
-3.070467655	9.354704462	9.354704462	9.354704462	9.354704462
-3.04174462	9.03374462	9.03374462	9.03374462	9.03374462
-2.88788104	9.27344704	9.27344704	9.27344704	9.27344704

FIG. 28D

-29	-20.11687648	30.88312152	46.34644094	3.775922346	4.662875769	141	4.399733301	2.258320419	-2.40454335	8.989122239
-28	-19.4543137	30.3450863	45.75721779	3.856725038	4.596266659	140	4.478190132	2.275929274	-2.30337385	8.71418435
-27	-18.76830438	30.21109562	45.17836481	3.996354178	4.528257481	139	4.555038137	2.292088663	-2.236168816	8.447963164
-26	-18.11900413	29.88099587	44.60840933	4.014783638	4.458688953	138	4.630330292	2.306831367	-2.172037386	8.189970492
-25	-17.44651611	29.53343689	44.04792862	4.09159016	4.38812221	137	4.703959895	2.32017318	-2.067944891	7.932634958
-24	-16.771282	29.2288718	43.49589819	4.167950223	4.316048802	136	4.776516178	2.332145698	-1.963893104	7.696522233
-23	-16.09284309	28.99715691	42.9519469	4.242640887	4.242640887	135	4.846496673	2.342154886	-1.89885701	7.462031938
-22	-15.41184847	28.59815153	42.4163674	4.316038072	4.167950223	134	4.915302966	2.352026023	-1.839271198	7.23031428
-21	-14.72828216	28.27171784	41.88655372	4.38812221	4.09159016	133	4.982475402	2.359967077	-1.772023084	7.008377646
-20	-14.04227922	27.93772078	41.36433041	4.458688953	4.014783638	132	5.048020204	2.366603877	-1.648179761	6.786587225
-19	-13.35397213	27.64602787	40.84851323	4.528257481	3.996354178	131	5.118714521	2.371949683	-1.564044491	6.576596186
-18	-12.66340992	27.33650908	40.33882295	4.596266659	3.856725638	130	5.17408347	2.376203018	-1.48070534	6.36884441
-17	-11.97068337	27.02090673	39.83489127	4.662875769	3.775922346	129	5.224620177	2.378831218	-1.397091128	6.165592065
-16	-11.27651469	26.72348531	39.33030665	4.728024522	3.693968632	128	5.292457817	2.380397468	-1.313713382	5.969122264
-15	-10.58210861	26.41973139	38.84300678	4.79181336	3.610880139	127	5.350641647	2.380733842	-1.230156297	5.776229105
-14	-9.882346561	26.11765344	38.35434785	4.854101966	3.526711514	126	5.405109039	2.379854836	-1.146856678	5.587725743
-13	-9.182686247	25.81713175	37.870399326	4.914912266	3.44148618	125	5.458669515	2.377747403	-1.063482915	5.40943778
-12	-8.481951716	25.51804828	37.39039292	4.974225435	3.355157421	124	5.511914773	2.374507483	-0.980449938	5.232302728
-11	-7.792713468	25.22028653	36.91476543	5.032034308	3.25783421	123	5.562267218	2.370676703	-0.89776718	5.046868097
-10	-7.076268582	24.92373142	36.44656228	5.088268577	3.179515385	122	5.610827462	2.36446704	-0.816048545	4.874290018
-9	-6.371730839	24.62626916	35.97997717	5.140030804	3.090228449	121	5.657679335	2.357721079	-0.73207357	4.70341171
-8	-5.66212848	24.33378715	35.50855338	5.196152423	3	120	5.702785307	2.349842602	-0.650157398	4.539885026
-7	-4.95826161	24.04017384	35.04608813	5.247118243	2.818629377	119	5.746138003	2.340844978	-0.568012743	4.377804808
-6	-4.252681398	23.7473196	34.58636313	5.297683557	2.723940298	118	5.787130838	2.330741512	-0.486087865	4.218982094
-5	-3.544888363	23.4511164	34.12913381	5.34609145	2.63226881	117	5.827557438	2.319545462	-0.40497537	4.063048528
-4	-2.836556162	23.16344384	33.6742391	5.392764278	2.53570957	116	5.865611791	2.307270659	-0.322958822	3.91066336
-3	-2.127793324	22.87220688	33.22140281	5.437846722	2.440419838	115	5.901886262	2.295928526	-0.241781045	3.760950066
-2	-1.418707911	22.58129509	32.77043319	5.520329146	2.344386711	114	5.936381607	2.279534091	-0.160885768	3.614095352
-1	-0.705407641	22.29059236	31.87326697	5.563103127	2.24763956	113	5.969086991	2.264100006	-0.080286765	3.469881699
0	0	22	31.87326697	5.563103127	2.24763956	112	6	2.24763956	0	3.328312088
1	0.709407641	21.70940764	31.42466559	5.601482559	2.150207697	111	6.029116637	2.230166995	0.079538398	3.189239486
2	1.418707911	21.41870791	30.98112062	5.638155725	2.05212086	110	6.056403436	2.21689015	0.159721155	3.052550472
3	2.127793324	21.12779332	30.53643681	5.673111454	1.953408927	109	6.081947272	2.192233804	0.238248677	2.918125623
4	2.836556162	20.83655616	30.09242115	5.706339098	1.854101966	108	6.105655573	2.171802035	0.317700069	2.783838603
5	3.544888363	20.54488836	29.64888252	5.737820376	1.754230228	107	6.127556236	2.150411382	0.396181154	2.655553954
6	4.252681398	20.2526814	29.20263146	5.767578166	1.653824135	106	6.14764765	2.128075633	0.478251408	2.527121413
7	4.95826161	19.9582616	28.76247979	5.795554958	1.552914271	105	6.165928715	2.10488696	0.518944425	2.40038603
8	5.66212848	19.6621285	28.31924036	5.821774538	1.451591374	104	6.182398843	2.080824615	0.551894425	2.275158008
9	6.371730839	19.37173084	27.87372677	5.846220389	1.349706326	103	6.197057976	2.055397576	0.582093241	2.15123164
10	7.076268582	19.07626858	27.43173531	5.868885654	1.247470145	102	6.209506387	2.039561919	0.608367031	2.028367031
11	7.792713468	18.77971347	26.9871336	5.889763101	1.144853972	101	6.220945693	2.02712145	0.637838173	1.906281266
12	8.51951716	18.48195172	26.54166248	5.908846518	1.041889065	100	6.230176863	1.975002928	0.663113862	1.784634384
13	9.182686247	18.18268625	26.09521362	5.926130044	0.93860679	99	6.237607222	1.946440123	0.689313362	1.668086643
14	9.882346561	17.88234656	25.6475403	5.941628412	0.83508606	98	6.24322464	1.917057774	0.70933123	1.540877564
15	10.58210861	17.58210861	25.19847501	5.95527691	0.73121606	97	6.247040853	1.886888122	0.7282091774	1.417556117
16	11.27651469	17.27651469	24.74782913	5.96713372	0.62717078	96	6.249072314	1.855871619	0.747838173	1.29212277
17	11.97068337	16.97068337	24.29541269	5.977168189	0.522934456	95	6.24958036	1.82409193	0.763113862	1.163273704
18	12.66340992	16.66340992	23.84103419	5.983388402	0.418538842	94	6.24757628	1.791544948	0.773306105	1.029059013
19	13.35397213	16.35397213	23.38450027	5.991777209	0.314015737	93	6.244323886	1.758246799	0.783306105	0.886307791
20	14.04227922	16.04227922	22.92561551	5.996349662	0.20939698	92	6.239316174	1.724213854	0.792913745	0.7441416
21	14.72828216	15.72828216	22.46418219	5.999868171	0.104714699	91	6.232440872	1.689465735	0.807748296	0.597182596
22	15.41184847	15.41184847	22	6	3.67545E-16	90	6.22380512	1.654010328	0.816048545	0.278780415

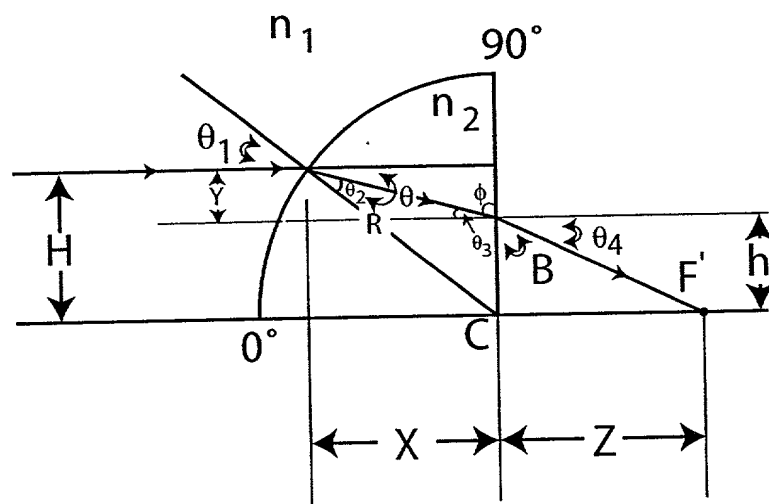


FIG. 29

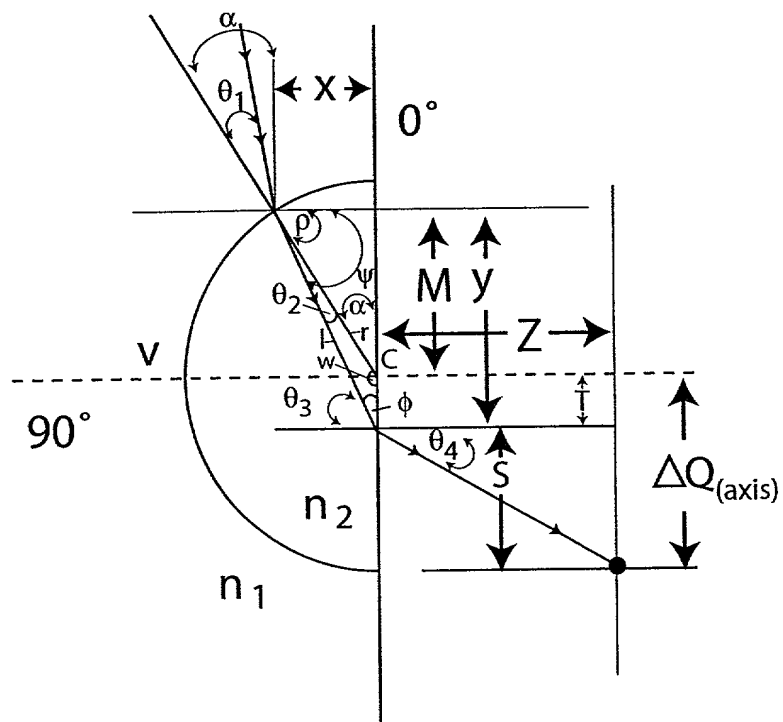


FIG. 30

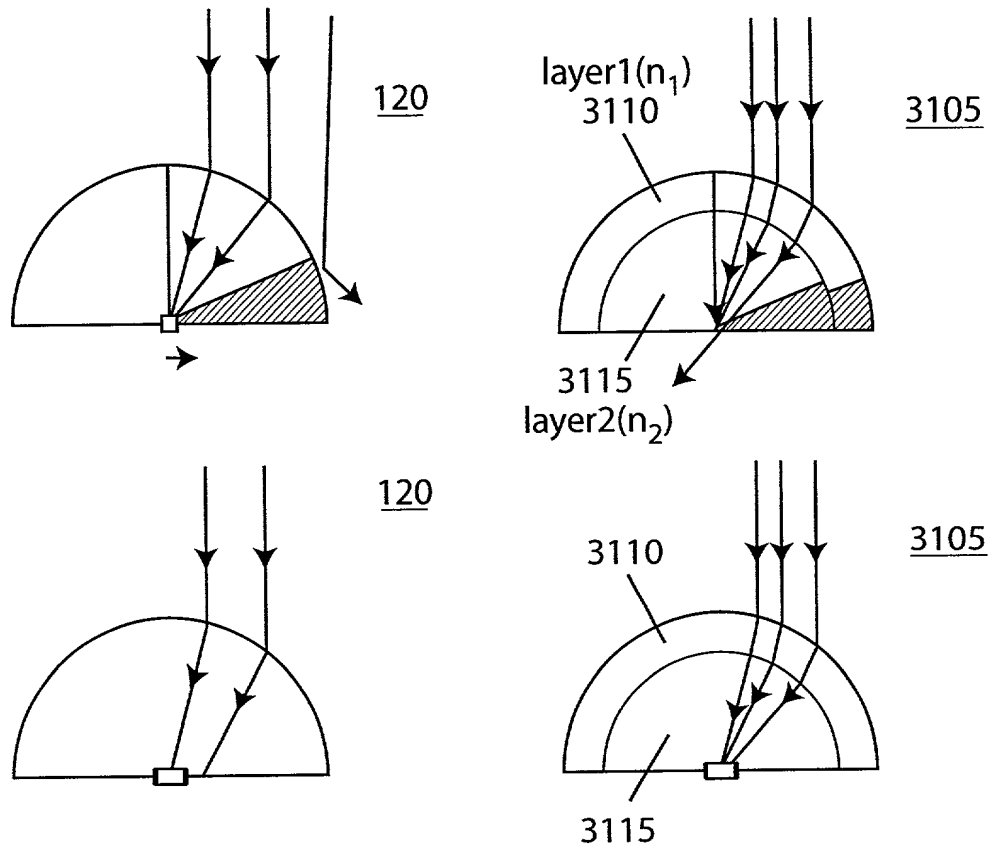


FIG. 31

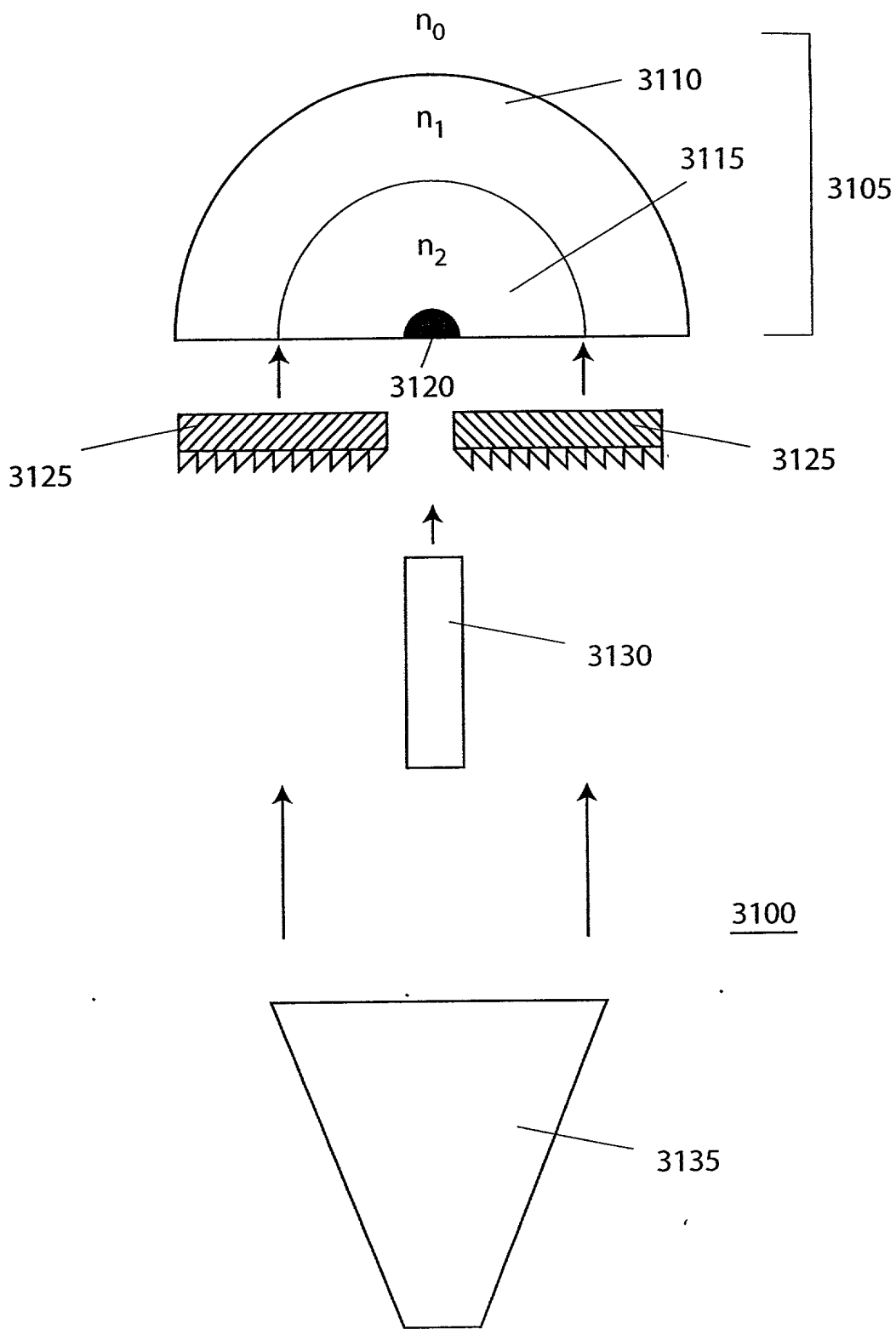


FIG. 32A

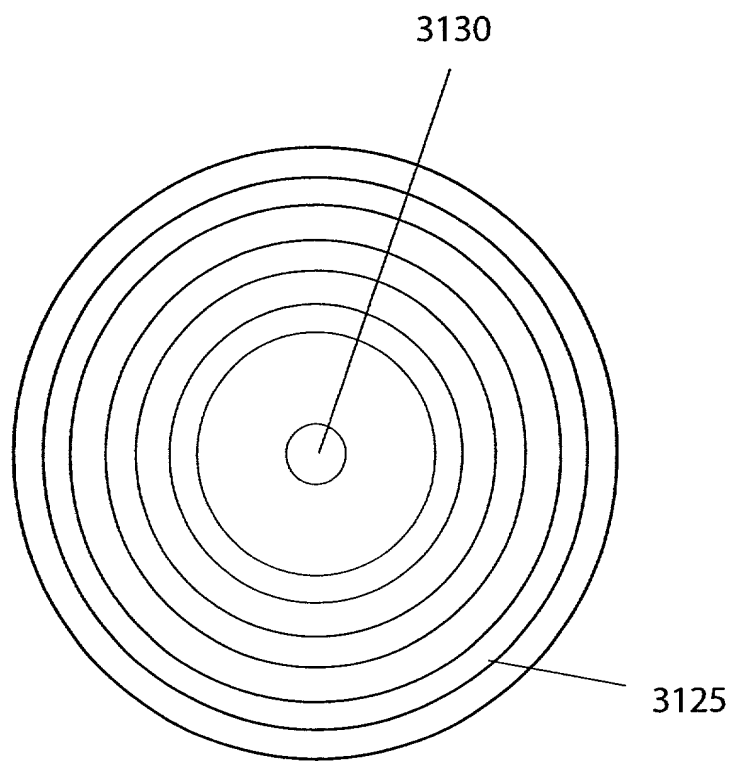


FIG. 32B

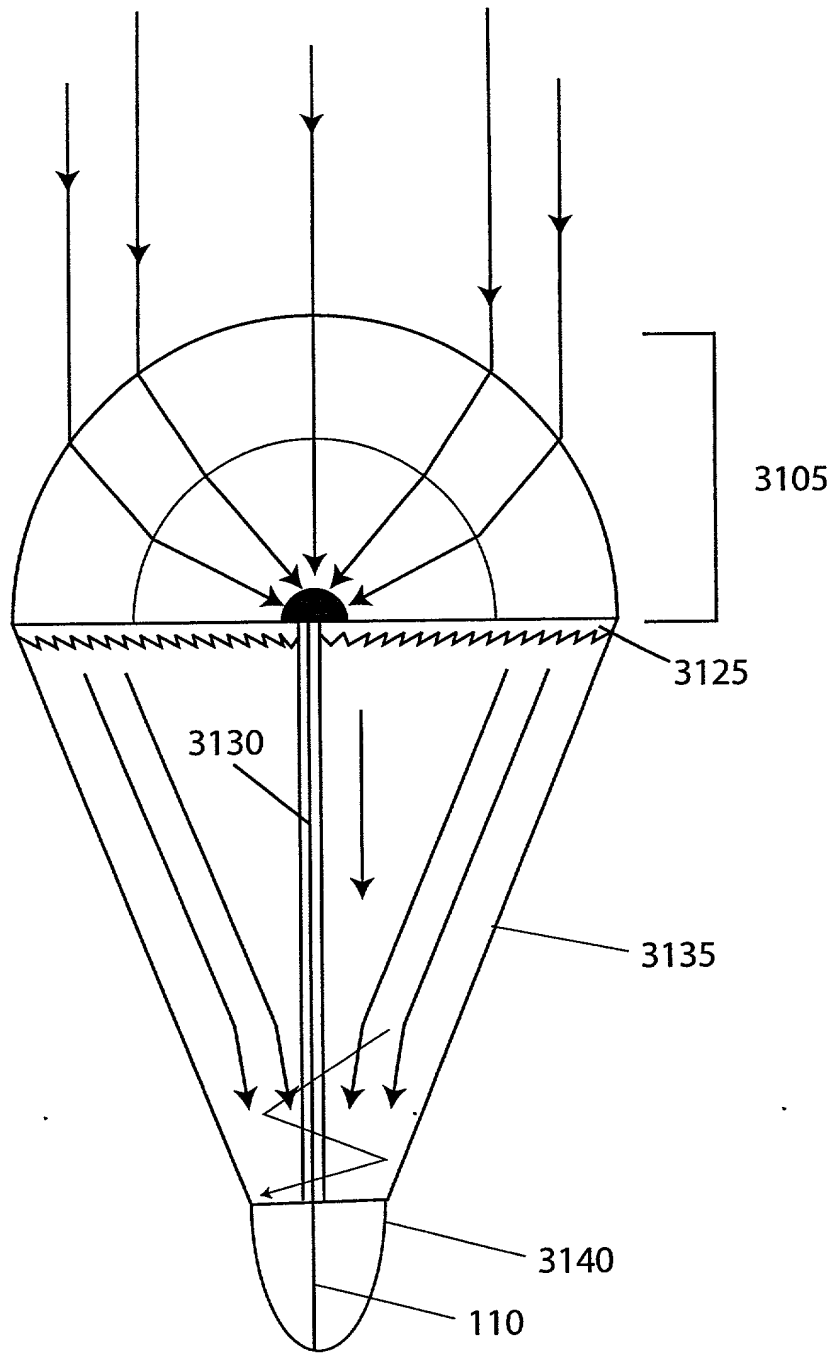


FIG. 32C

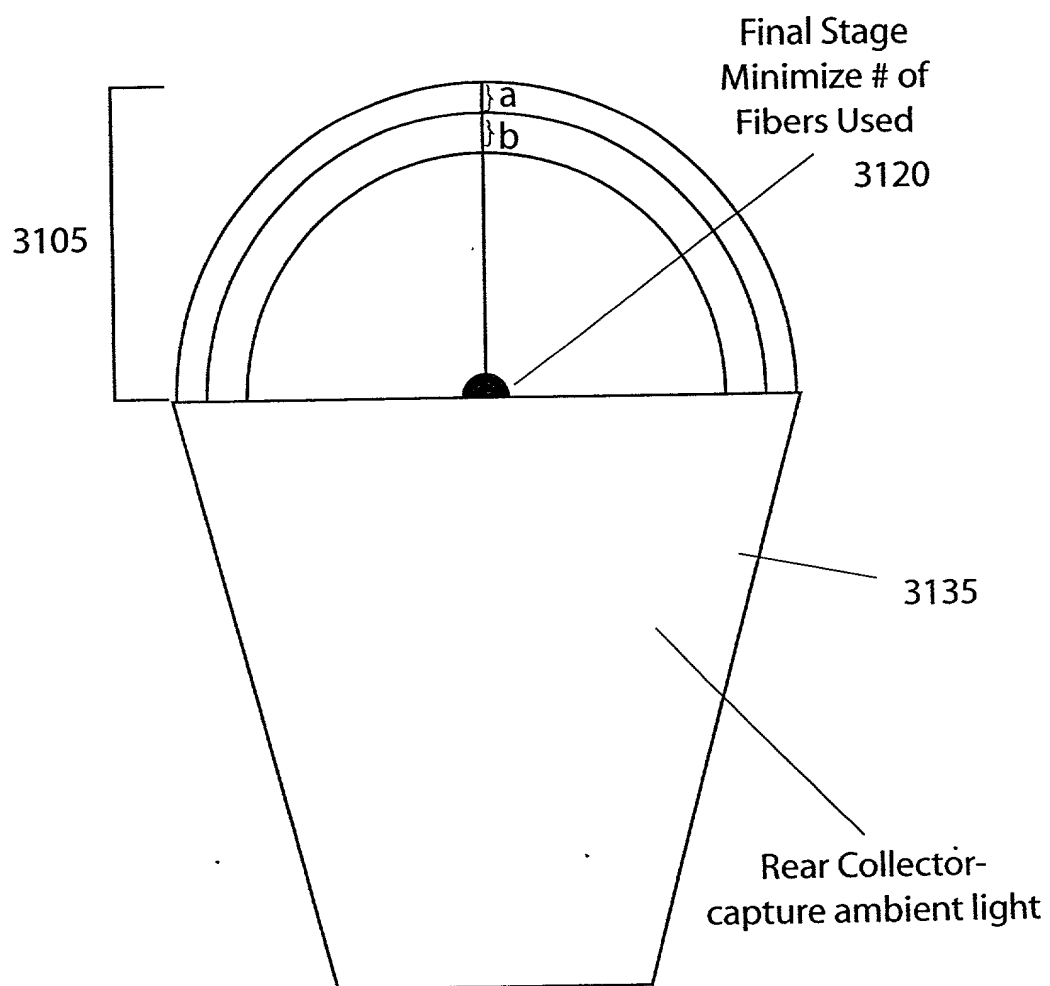


FIG. 32D

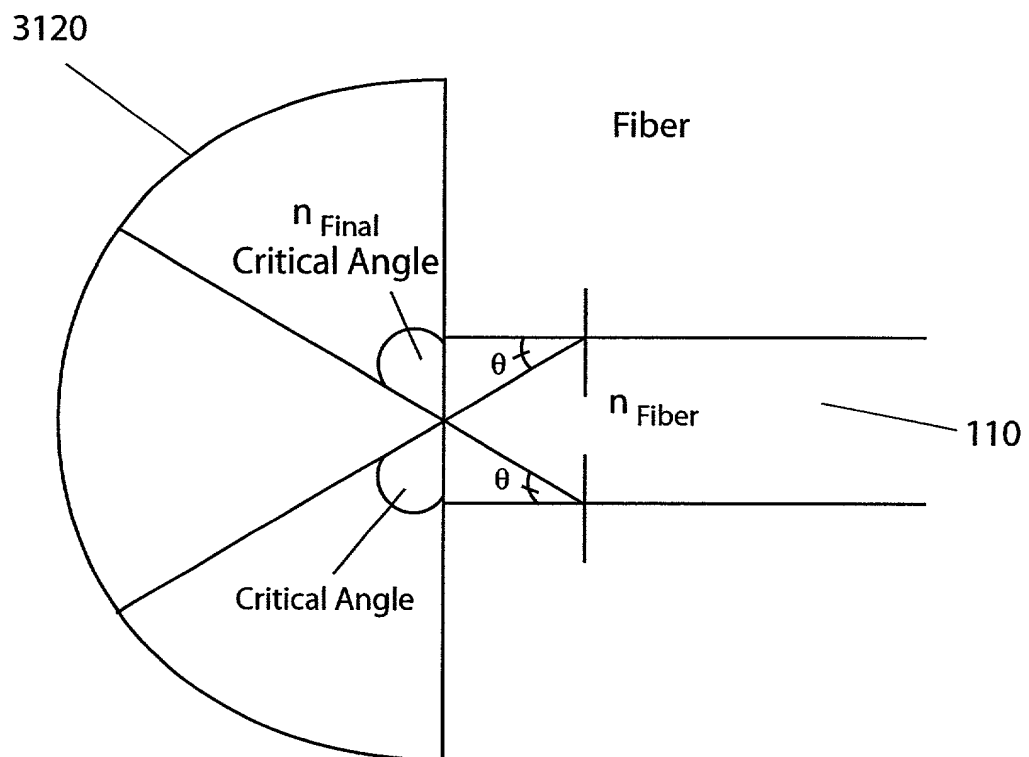


FIG. 33A

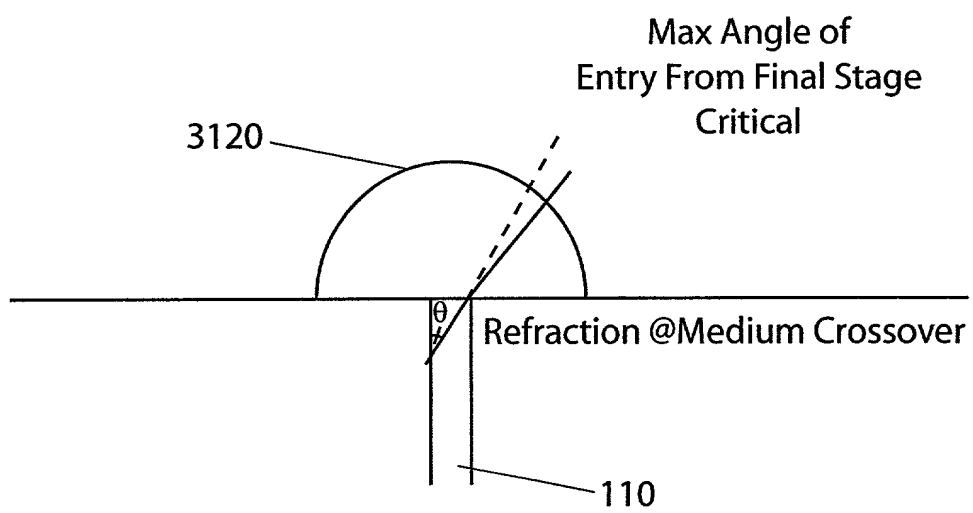


FIG. 33B

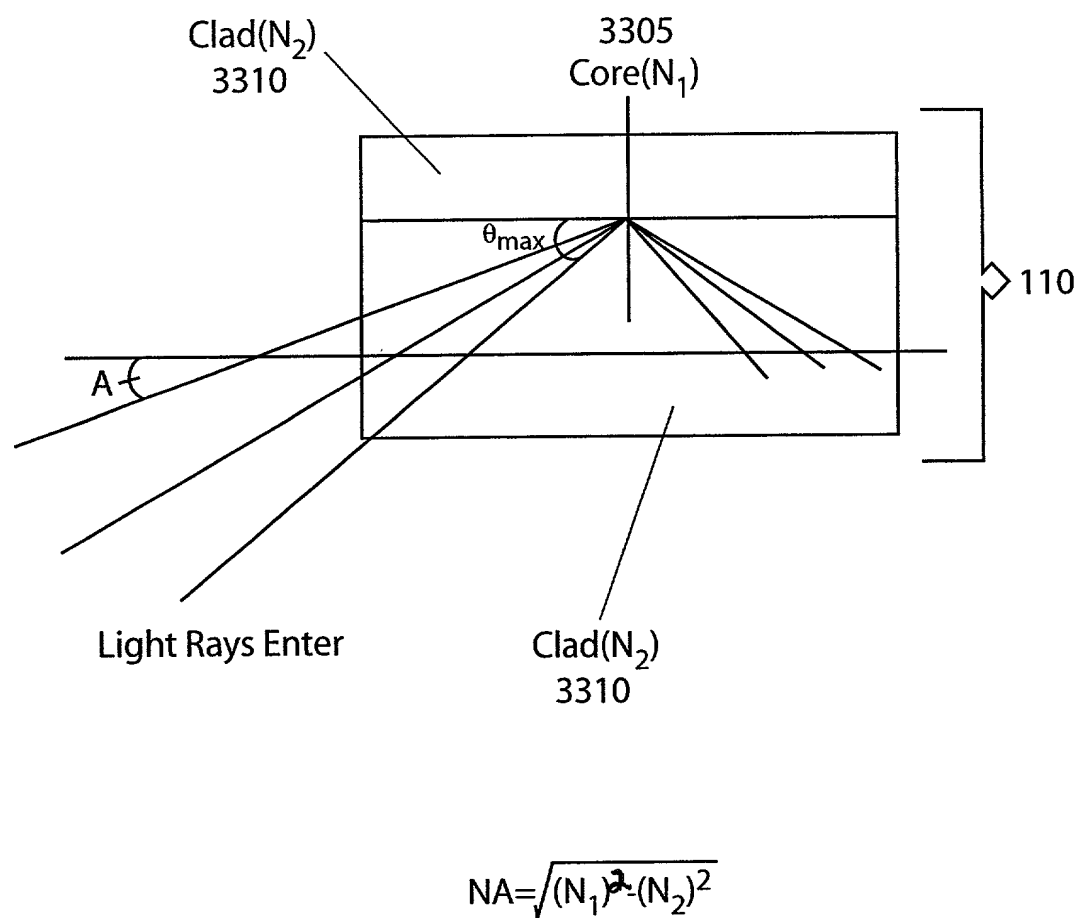


FIG. 33C

3400

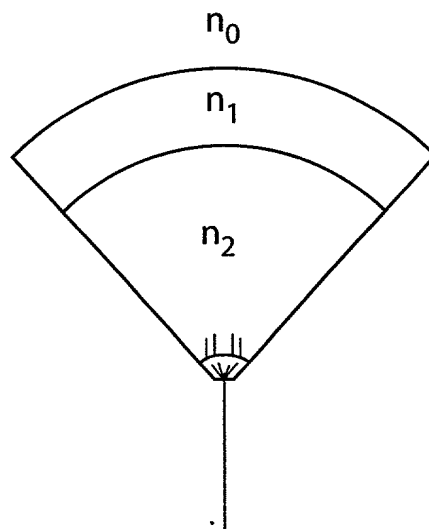


FIG. 34A

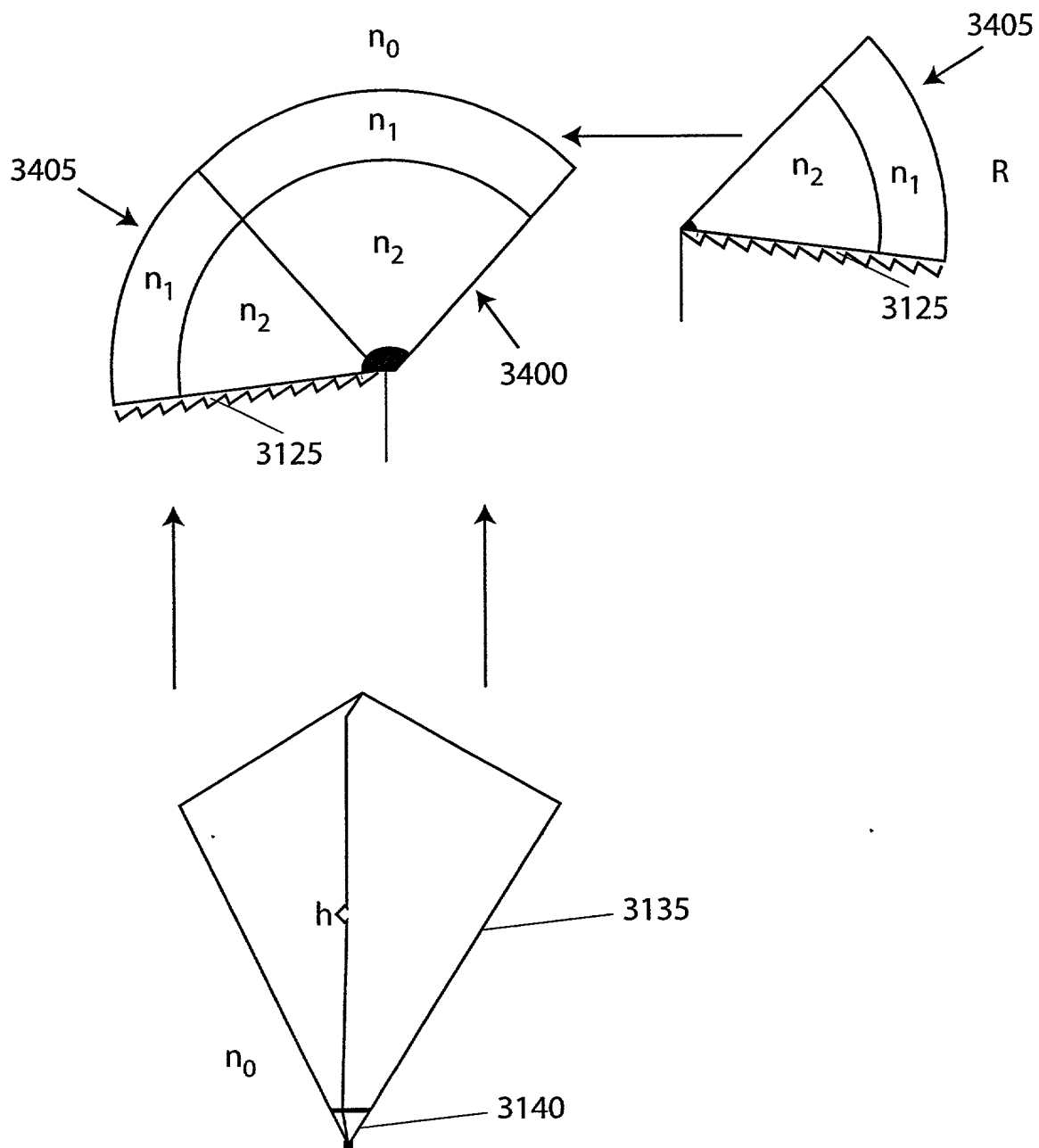


FIG. 34B

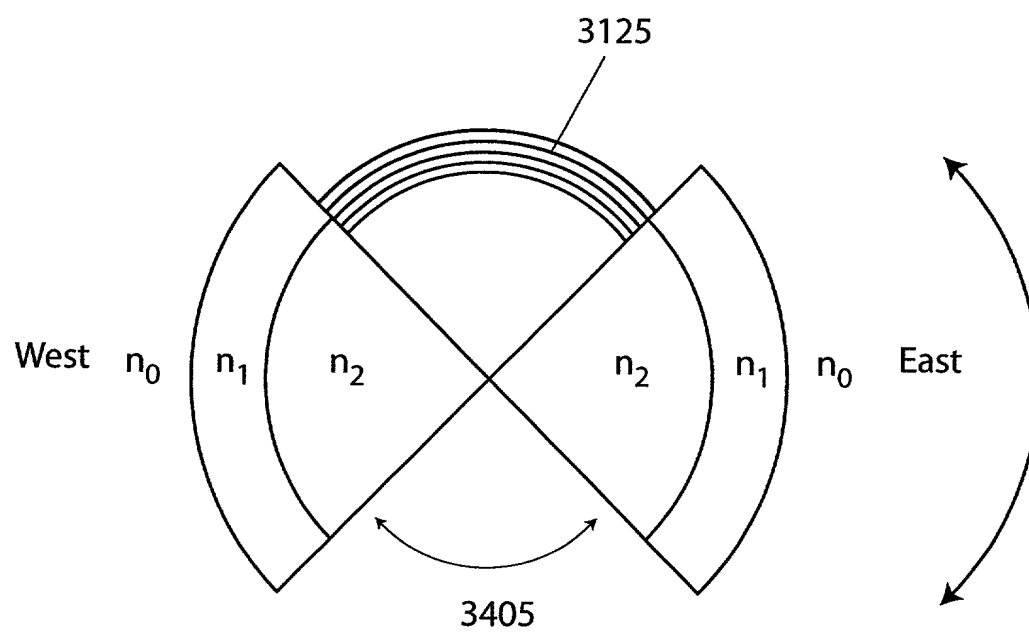


FIG. 34C